

## Technical and Bibliographic Notes / Notes techniques et bibliographiques

Canadiana.org has attempted to obtain the best copy available for scanning. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of scanning are checked below.

- Coloured covers /  
Couverture de couleur
- Covers damaged /  
Couverture endommagée
- Covers restored and/or laminated /  
Couverture restaurée et/ou pelliculée
- Cover title missing /  
Le titre de couverture manque
- Coloured maps /  
Cartes géographiques en couleur
- Coloured ink (i.e. other than blue or black) /  
Encre de couleur (i.e. autre que bleue ou noire)
- Coloured plates and/or illustrations /  
Planches et/ou illustrations en couleur
- Bound with other material /  
Relié avec d'autres documents
- Only edition available /  
Seule édition disponible
- Tight binding may cause shadows or distortion  
along interior margin / La reliure serrée peut  
causer de l'ombre ou de la distorsion le long de la  
marge intérieure.
  
- Additional comments /  
Commentaires supplémentaires:

Canadiana.org a numérisé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de numérisation sont indiqués ci-dessous.

- Coloured pages / Pages de couleur
- Pages damaged / Pages endommagées
- Pages restored and/or laminated /  
Pages restaurées et/ou pelliculées
- Pages discoloured, stained or foxed /  
Pages décolorées, tachetées ou piquées
- Pages detached / Pages détachées
- Showthrough / Transparence
- Quality of print varies /  
Qualité inégale de l'impression
  
- Includes supplementary materials /  
Comprend du matériel supplémentaire
  
- Blank leaves added during restorations may  
appear within the text. Whenever possible, these  
have been omitted from scanning / Il se peut que  
certaines pages blanches ajoutées lors d'une  
restauration apparaissent dans le texte, mais,  
lorsque cela était possible, ces pages n'ont pas  
été numérisées.

**PATENTS**

CAVEATS ETC.

EGERTON R. CASI

Registered Solicitor of Patent Notary Public; Member of the Canadian Manufacturers' Association

HEAD OFFICE

TEMPLE BUILDING TORONTO

OFFICES OTTAWA

AND WASHINGTON, D.

**AN ADIAN MANUFACTURER**  
 AND INDUSTRIAL WORLD  
 DEVOTED TO THE MANUFACTURING INTEREST OF THE DOMINION

VOL. 43. TORONTO, NOVEMBER 15, 1901. No. 10

**STEAM BOILERS**  
 FOR ALL PURPOSES  
 ECONOMY  
 DURABILITY  
 SAFETY  
 HEATERS, SUPERHEATERS,  
 ECONOMIZERS  
 AND STEAM ACCESSORIES  
**BABCOCK & WILCOX**  
 LIMITED  
 202 ST. JAMES ST., MONTREAL  
 Toronto Office—114 King St. West

**MILL SOAPS**  
 For all TEXTILE PURPOSES  
 MANUFACTURED BY  
 Dominion Dyewood  
 and Chemical Company,  
 TORONTO

**Steel Plates**  
 TANK, BOILER, FIRE BOX  
 AND OTHER GRADES.  
**Steel Sheets**  
 LYSAGHT'S MAKE  
 UNEXCELLED  
 FOR QUALITY AND FLATNESS.  
 Low Prices for Import to  
 Wholesale Buyers.  
**A. G. LESLIE & CO.,**  
 MONTREAL  
 Sanderson's Tool Steel in Stock.

**RUBBER INSULATED WIRES AND CABLES**  
 OF EVERY DESCRIPTION for  
 Telephone, Telegraph and Electric Lighting Purposes.  
 MAGNET WIRES ANNUNCIATOR WIRES  
**The WIRE AND CABLE COMPANY, - Montreal.**

**Fensom's**  
 ELECTRIC  
 HYDRAULIC  
 STEAM  
 HAND-POWER  
 All made of the best  
 material and  
 Finest workmanship.  
**Elevators**  
 The Fensom  
 Elevator  
 Works ...  
 52, 54, 56  
 Duke Street,  
 Toronto, Ont.

**RUBBER GOODS OF ALL KINDS.**  
  
**61 and 63 FRONT ST. WEST, TORONTO.**

THE....  
**Walkerville Malleable Iron Co., (Limited)**  
 Manufacturers of  
**REFINED AIR FURNACE Malleable Castings**  
 ALSO LIGHT GREY IRON CASTINGS.  
**WALKERVILLE, ONTARIO.**

THE QUEEN CITY OIL CO. TORONTO. MANUFACTURERS OF  
 PIPE AND CORE SAND. WRITE FOR PRICES.  
 ALSO EXTRA FINE QUALITY MOUNDING SAND  
 SUPPLIES IN Ceylon Plumbago  
 HAMILTON, ONT.

**JOHN J. KELLER & CO.,** 104 and 106 Murray St.  
NEW YORK  
220 Church St., Philadelphia.  
135 Pearl St., Boston. 18 Pryor St., Atlanta, Ga.

**Aniline Colors, Dyewood Extracts,  
Sumac and Nutgall Extracts. . .**

**FAST COLORS** for Wool Dyeing, One Dip Cotton Colors,  
Novelties and Specialties for Calico Printing.

MANUFACTURED BY

**JOHN R. GEIGY & CO.,**  
BASLE, SWITZERLAND.

## ANILINES

**St. Denis Dyestuff and Chemical Co.,**  
(A. POIRRIER), of Paris, France.  
Manufacturers of

Aniline Colors, Aniline Oil and Salt, Archil Extracts  
Cudbear, Cachou de Laval, Thiocatchines, etc.

A Complete Assorted Stock of the above always on hand.

**W. T. Benson & Co.,**

Sole Agents for Canada.

164 St. James St., MONTREAL

## PORTLAND CEMENT SAMSON BRAND MAGNET BRAND

Made at **SHALLOW LAKE, ONT.**

Our Celebrated **Samson Brand** has been before the public for many years, and has made hosts of friends among Contractors and Municipal Corporations until it has become one of the leading Cements on the market to-day, being excelled by none. This year we have decided to place the **Magnet** on the market, and respectfully ask consumers to give it a trial. It will, we think, do its own advertising.

**The OWEN SOUND PORTLAND CEMENT CO., Limited**

Correspondence invited.

**GEO. S. KILBOURN, Sec'y-Treas.**

Works, **SHALLOW LAKE, Ont.**

Head Office, **OWEN SOUND, Ont.**

New Black for Cotton

## Colonial Black

**Double Strength. Unequaled for Depth of Shade.**  
Users of Black should investigate  
**Fastest Black on the Market.**

**F. E. ATTEAUX & CO.,**

BOSTON, MASS., U.S.A.

CANADIAN BRANCHES:—63 Colborne Street, TORONTO.  
13 Lemoine Street, MONTREAL.

## CHARCOAL PIG IRON

**Deseronto Iron Company**

(LIMITED)

DESERONTO, ONTARIO

MANUFACTURERS OF

High Grade Charcoal Pig Iron for Special  
Foundry Purposes, Malleable Castings, Car  
Wheels and other Chilled Castings.

**SELBY & YOULDEN**

SOLE MANUFACTURERS IN CANADA OF

**PRESSED STEEL CAR WHEELS**

(Donovan Patent)

Roller Bearing Railway Section Hand and Push  
Cars, Track Laying Cars and Velocipedes;

ALSO OF THE

Celebrated "**CARROLL**" PROPELLOR WHEELS

MARINE ENGINES and BOILERS, CAPSTANS,  
STEERING GEARS, DOUBLE and SINGLE DRUM HOISTING ENGINES

Mill and General Boiler and Engine Repairs  
promptly attended to.

**KINGSTON FOUNDRY,** SELBY & YOULDEN,  
Proprietors,  
KINGSTON, ONT.

**CANADA IRON FURNACE CO., LIMITED**

Montreal, Radnor and Three Rivers

Manufacturers of the well-known

"**C.I.F.**" Three Rivers Charcoal Pig Iron

Suitable for Car Wheels, Cylinders and Fine Castings,  
where the utmost strength is required.

UNSURPASSED IN STRENGTH BY SWEDISH, RUSSIAN  
OR AMERICAN CHARCOAL IRON.

Offices: *Canada Life Insurance Bldg., Montreal.*

**MONTREAL PIPE FOUNDRY CO...**

SUCCESSORS TO

(Limited)

**DRUMMOND-McCALL PIPE FOUNDRY CO.**

Manufacturers of

(Limited)



"Specials," Hydrants, Valves, Etc.

Offices: - - - **Canada Life Building,**  
**MONTREAL**

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

**MANUFACTURERS** should know something about the cost of their power. Fuel is not the only item. Repairs must be considered.

**The WHEELOCK and IDEAL ENGINES** are economical in every respect. Have even speed and good regulation.

**WE ALSO MAKE** Gas and Gasoline Engines, Boilers, Water Wheels, Pumps, Flour Mill Machinery, Oat Meal Mill Machinery, Oat Meal Steam Pan Kilns, Wood Working Machinery, Iron Pulleys, Wood Rim Split Pulleys, Shafting, Hangers, Gearing, Friction Clutch Pulleys, Friction Clutch Couplings, Chain Tackle, etc., Safes, Vaults and Vault Doors.

Write for Catalogue.

**The GOLDIE & MCGULLOCH CO.**  
LIMITED  
GALT, - - ONT.

**THE IMPERIAL OIL COMPANY, Limited.**

Highest Awards at the World's Fair, Chicago, upon

**Lubricating, Water White Illuminating Oils,  
Paraffine Wax, Etc.**

We manufacture all grades of oils, greases, soap stocks, candles, wool stocks, leather and tanners' oils, fuel gas, machinery, cylinder oils, &c. And solicit opportunity to compete against any oil on the market. Write for prices and samples.

Refineries at **SARNIA and PETROLIA, CANADA.**

Merchandising Branches at:

HALIFAX, N. S. HAMILTON, ONT. QUEBEC, QUE. LONDON, ONT. TORONTO, ONT. WINNIPEG, MAN. ST. JOHN, N. B. GUELPH, ONT. MONTREAL, QUE. CHATHAM, ONT. PETERBORO, ONT. VANCOUVER, B. C. MONCTON, N. B. STRATFORD, ONT. KINGSTON, ONT. WINDSOR, ONT.

The John Bertram & Sons Co., Limited

DUNDAS,  
ONTARIO

**Canada Tool Works**

**MACHINE TOOLS**

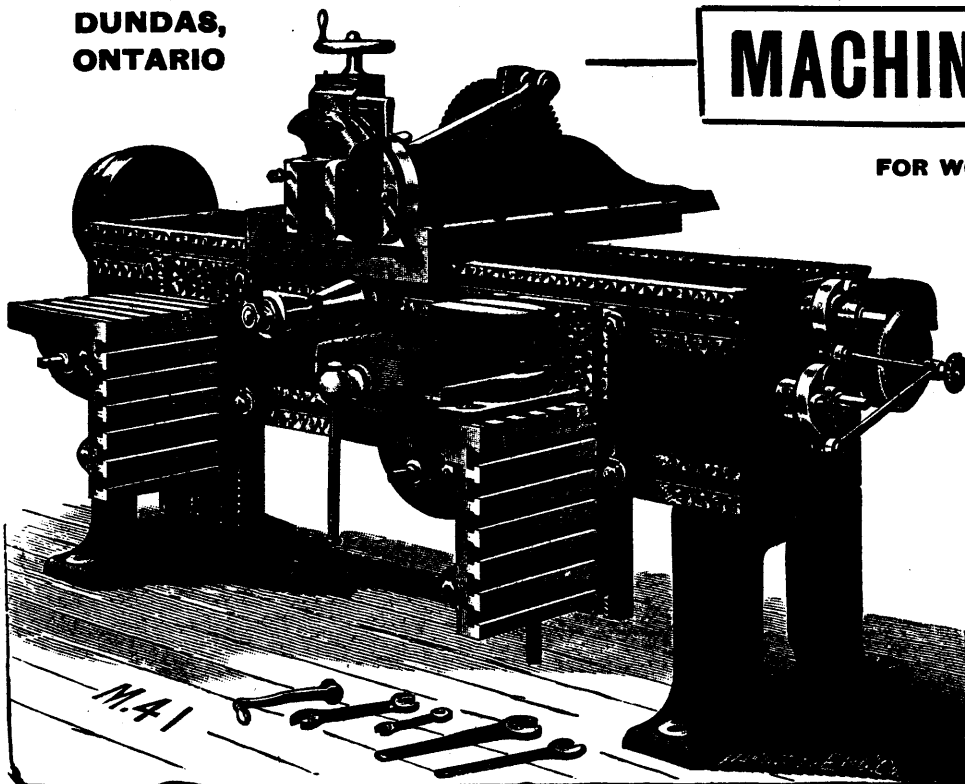
FOR WORKING

**IRON, STEEL  
OR  
BRASS**

.....  
**PULP AND PAPER**  
MACHINERY  
.....

Branch Offices and Agencies—

**Vancouver, B.C.  
Montreal, Que.**  
321 St. James St.



When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

# THE NOVA SCOTIA STEEL CO., LIMITED

MANUFACTURERS OF

## BRIGHT COMPRESSED STEEL SHAFTING

FROM  $\frac{1}{2}$  TO 5 INCHES IN DIAMETER. GUARANTEED STRAIGHT AND TRUE TO WITHIN  $\frac{1}{16}$  OF AN INCH.

Spring, Reeled Machinery, Tire, Toe Caulk, Sleigh Shoe, Angles, Special Sections and all Merchant Bar Steel. Sheet Steel up to 48 inches wide.

**RAILWAY AND ELECTRIC RAILWAY CAR AXLES**

**FISH PLATES, SPIKES AND TRACK BOLTS**

Toe Rails, 12, 18, 24 and 28 lbs. per yard

**..HEAVY FORGINGS A SPECIALTY..**

**"FERRONA" PIG IRON, For Foundry Use.**

Works—NEW GLASGOW, N.S., and FERRONA, N.S.

Head Office—NEW GLASGOW, NOVA SCOTIA

## GALT Machine Knife Works

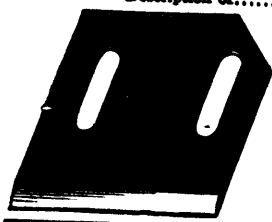
**PETER HAY,**



**GALT, ONT.**

Manufacturers of Every Description of.....

**KNIVES, For Wood-Working, Paper Cutting and Leather-Splitting Machines**



BARK KNIVES  
PULP KNIVES  
RAQ KNIVES  
Etc., Etc.



Shear Blades,  
Straw Knives,  
Paper Knives,  
Etc., Etc.



Quality Guaranteed. Special Knives Made to Order. Send for Price List

## **DOMINION BRIDGE CO., Limited,**



**MONTREAL AND  
LACHINE LOCKS, P.Q.**

**Steel Bridges for Railways and Highways,  
Steel Piers and Trestles, Steel Water Towers and Tanks,  
Steel Roofs, Girders, Beams, Columns for Buildings.**

A large Stock of **ROLLED STEEL BEAMS, JOISTS, GIRDERS, CHANNELS, ANGLES, TEES, Z BARS and PLATES**

Tables, giving Sizes and Strength of Rolled Beams on application.

**ALWAYS ON HAND** IN LENGTHS TO THIRTY-FIVE FEET.

Post Office Address,  
**MONTREAL.**

**GEORGE E. EVANS,** Agent, 38 Canada Life Building  
TORONTO ONT.

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

# BRUNNER, MOND & CO., Limited, NORTHWICH, ENGLAND.

## PURE ALKALI

48% and 58% (Light and Heavy)

## BLEACH<sup>g</sup> PWD.

35% to 37% (Hardwood Casks)

## CAUSTIC SODA

60% to 77%



TRADE MARK.  
Winn & Holland,  
MONTREAL,  
Sole Agents for Canada.

## SODA CRYSTALS

Lump and Crushed. Brls. and Bags.

## CON<sup>CTD</sup> SAL SODA

DOUBLE STRENGTH

## BICARBONATE SODA

ABSOLUTELY PURE

Also for Mineral Water Manufacturers.

## The Wellington Mills, LONDON, ENG. GENUINE EMERY

Oakey's Flexible Twilled Emery Cloth.  
Oakey's Flint Paper and Glass Paper.  
Oakey's Emery Paper, Black Lead, Etc.  
Prize Medal and Highest Award Philadelphia, 1876, for Superiority of Quality, Skilful Manufacture, Sharpness, Durability, and Uniformity of Grain.  
Manufacturers **JOHN OAKEY & SONS, LIMITED,** Wellington Mills, Westminster Bridge Road, London, Eng.

Inquiries should be addressed to

**JOHN FORMAN,** 650 CRAIG ST., MONTREAL

## HAMILTON COTTON CO., HAMILTON, ONTARIO.

## Yarn Manufacturers, DYERS AND BLEACHERS.

Warp Yarns of all descriptions, in Skein, Chain or on Beams.  
Hosiery Yarns in single or double, in Cop, Skein or Cone.  
Yarns of all kinds for Manufacturers' use.

**Twines, Lampwicks, Webbing, Etc.**

Dyeing of all Colors, including **GENUINE FAST BLACK.**

# Royal Paper Mills Company, Limited

Mills -AND-  
Head  
Office:  
East Angus,  
QUE.



WAREHOUSES:  
763 Craig Street,  
MONTREAL, QUE.  
52 and 54 Front St. W.  
TORONTO, ONT.

R. P. BUCK, - - - PRESIDENT AND GENERAL MANAGER.



# Paper

Fine News, Book, Lithograph, Tab and Engine Sized Writing, and Colored Cover Papers.

# Pulp and

**ROYAL CANADIAN BRAND**  
Soda and Mechanical Pulp

# Lumber

SPRUCE, PINE and HARDWOOD (Dressed and in Rough.)  
CLAPBOARDS and SHINGLES.

CABLE ADDRESS—"OBBAPER," EAST ANGUS—A.B.C. and Lieber's Code.

When writing to Advertisers kindly mention **THE CANADIAN MANUFACTURER.**

# ALBERT MANUFACTURING CO.

MANUFACTURERS OF THE  
WELL-KNOWN

"HAMMER BRAND"

## Calcined Plaster

AND

Patent Rock Wall Plaster

HILLSBOROUGH, N. B.,  
CANADA.

## KEMP MNFG. CO.

TORONTO.

### Galvanizing

DONE FOR THE TRADE.

GET OUR PRICES.



For IRON FENCING,  
BANK and OFFICE RAIL-  
INGS and all kinds  
of IRONWORK

Address:

Toronto Fence & Ornamental Iron Works  
89 Queen St. East, Toronto.

## BROWN & CO.

Manufacturers of

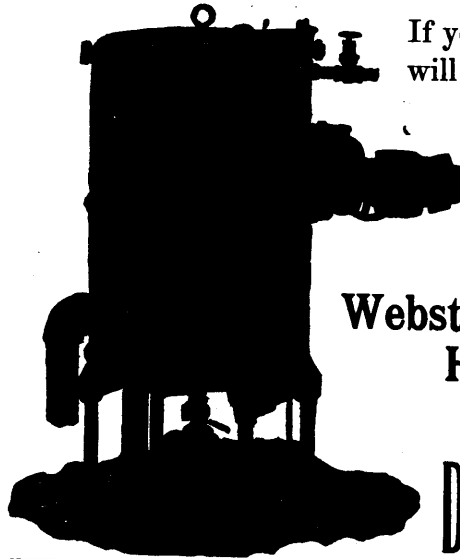
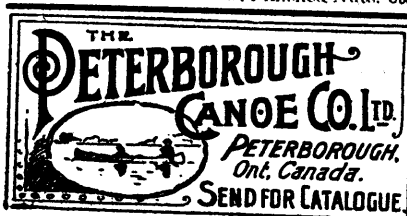
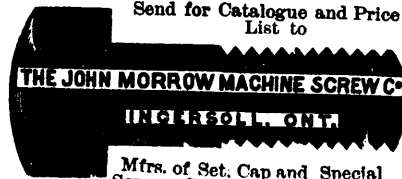
Square and Hexagon

HOT PRESSED NUTS.

PARIS, - ONT.



Send for Catalogue and Price  
List to



If you find your Fuel Account high it  
will pay you to send for our literature.

ASK ESPECIALLY ABOUT OUR

### WEBSTER SYSTEM OF STEAM HEATING

FOR HEATING BUILDINGS  
BY THE WASTE EXHAUST STEAM

— AND THE —

### Webster Vacuum Feed Water Heater and Purifier

And we will explain HOW  
you can reduce your COAL BILL.

**DARLING BROS.** RELIANCE WORKS,  
7 OTTAWA ST.  
*Montreal.*

## A. KLIPSTEIN & CO. 122 Pearl St. New York

### Anilines, Dyestuffs & Chemicals

DELIVERY MADE AT NEW YORK, MONTREAL OR HAMILTON.

WRIGHT & DALLYN, AGENTS,  
HAMILTON, ONT.

# Quick Delivery OF BOILERS

We have in stock material for the following sizes and styles  
of Boilers:

MUMFORD STANDARD,	-	20 to 175 h.p.
MUMFORD PORTABLE,	-	6 to 110 h.p.
RETURN TUBULAR,	-	12 to 125 h.p.
VERTICAL,	-	4 to 60 h.p.

As we have a large shop, thoroughly equipped with the latest  
appliances, we can deliver any of the above sizes on short notice.

Competent persons tell us that the quality of our boiler work  
cannot be surpassed.

## ROBB ENGINEERING CO. Limited AMHERST, N.S.

Agents { WM. McKAY, 19 McKenzie Crescent, Toronto.  
WATSON JACK & CO., 7 St. Helen St., Montreal.

# Wm. J. Matheson & Co., Limited

Importers and  
Manufacturers of

## ..DYE STUFFS..

New York  
Boston  
Philadelphia  
Providence  
Charlotte, N.C.  
Montreal, Canada

# RUBBER BELTING

"We have been using your 'Para' brand of rubber belting for a number of years; we have found same to give us entire satisfaction."

THE MONTREAL WAREHOUSING CO.,  
Montreal.

THE  
**CANADIAN RUBBER CO**  
MONTREAL \* TORONTO  
WINNIPEG

## ROSSENDALE, M.A.Y. WOVEN BELTING

Twice the strength of Leather  
Used by all the large manufacturers  
Very much cheaper  
Lasts longer

Every Belt Guaranteed

Specially suitable for Damp Work  
All sizes up to 20 inches in stock for  
immediate delivery

Write for our quotations before buying your belts

CANADIAN  
AGENTS:

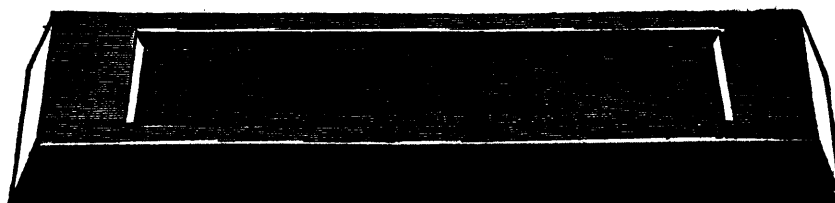
**R. H. BUCHANAN & Co., 692 Craig St., Montreal**

## THE BEST IS NONE TOO GOOD.

The largest machinery builders in Canada and United States use our Babbitt Metal.  
Is this not sufficient proof of its superiority over other anti-friction metals?  
If the largest users are satisfied with our Babbitt Metals, why should it not suit you?  
We can furnish you with numbers of testimonials.

Importers and Dealers in

PIG TIN, ANTIMONY  
INGOT COPPER  
ALUMINUM  
NICKEL, BISMUTH  
IRON AND STEEL  
SCRAP



Manufacturers of

BABBITT METALS, SOLDER  
TYPE METALS  
COLUMBIA PHOSPHOR TIN  
AND  
ALL OTHER WHITE METAL MIXTURES

<b>SYRACUSE</b>
<b>BABBITT</b>
<b>BEATS THEM ALL</b>

## SYRACUSE SMELTING WORKS

WILLIAM AND ST. THOMAS STREETS, - - MONTREAL

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.



# Pumping Machinery

"For all Duties"

THE  
NORTHEY  
GAS AND  
GASOLINE  
ENGINE

Air Pumps  
Acid Pumps  
Feed Pumps  
Mine Pumps  
Fire Pumps  
Tank Pumps  
Duplex Power  
& Stuff Pumps  
Sinking Pumps  
Suction Pumps  
Tannery Pumps  
Duplex and  
Triplex  
Power Pumps

Canadian Manufacturers and Engineers will find it to their interest to refer to us when in need of anything in the shape of Pumping Machinery.

CATALOGUES AND  
SPECIFICATIONS  
SENT ON REQUEST

Supplies a cheap, simple, easily applicable form of power that is filling the necessity for such a motor very extensively and satisfactorily. The running expenses are very light. It requires no experience to handle, and runs for hour without attention. Well adapted for running independent electric lighting plants or pumping and elevator plants.

SEND FOR ILLUSTRATED BOOKLET

THE *Northey*  
Company  
Limited, Toronto  
1000 KING ST.  
SUBWAY

## THE MASON REGULATOR CO.

ESTABLISHED 1883

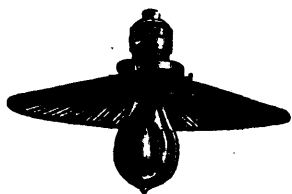
### Standard Steam Specialties

Reducing Valves, Damper Regulators, Pump Governors and Automatic Appliances of all Descriptions for the Regulation and Control of Steam, Water and Air Pressures.

158 Summer St., Boston, Mass.

Works at MILTON, MASS., U.S.A.

**RODERICK J. PARKE,** CONSULTING ENGINEER TO MANUFACTURERS: - Competent and impartial advice on Industrial Electrical Systems of Lighting, Power Distribution, Heating and Welding, Etc. Plans, Specifications, Tests, Reports, Valuations.  
Temple Bldg., - TORONTO.  
Long Distance Telephone.



## Reflectors, Shades, Lamps

We Stock a Large Variety of SHADES and REFLECTORS in

ALUMINUM, MIRROR, CELLULOID, PAPER, PORCELAIN,  
FOR FACTORY AND OFFICE.

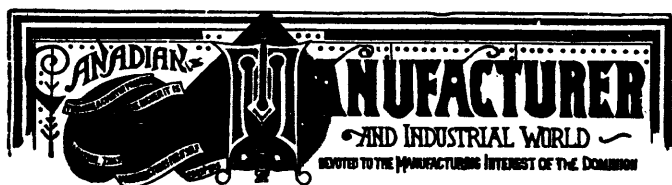
Imperial Lamps and Helios Upton Enclosed Arcs Give BEST LIGHT with LEAST CURRENT

ELBRIDGE Sparking Dynamos, SAMSON Batteries and IMPERIAL Salts, for Gas or Oil Engines.

Write us about Lighting  
your Factory or Office.

**JOHN FORMAN, 708 and 710 Craig St., MONTREAL**

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.



ESTABLISHED IN 1890.

PUBLISHED ON THE FIRST AND THIRD FRIDAYS OF EACH MONTH

**The Canadian Manufacturer Publishing Co., Limited.**

McKinnon Building, Cor. Melinda and Jordan Sts., Toronto.  
Cable address: "CANAMAN." Western Union Telegraphic Code used.

**MESSRS. DAVISON & CO.,**

164 Federal Street, Boston, Mass.  
AGENTS FOR UNITED STATES.

Index to Advertisers ..... Page 42

*J. J. CASSIDY,* Editor and Manager.

#### CANADIAN MANUFACTURERS' ASSOCIATION.

The Twenty-sixth Annual Meeting of the Canadian Manufacturers' Association was held in Montreal November 5 and 6. The convention was attended by a large number of members from all parts of Canada, and was of a most interesting character. Besides the election of officers for the ensuing year quite a number of matters were discussed and acted upon bearing upon the manufacturing interests of the country; and a number of resolutions of the usual character were passed. After the organization of the meeting the members proceeded in a body to the City Hall where an address of welcome was made by Mayor Prefontaine which was appropriately responded to by Mr. Ellis, president of the Association. At the afternoon session the president read his usual address, which was very able and comprehensive in character, and which will be alluded to in these pages at another time. Mr. William Whyte, assistant to president Sir Thomas Shaughnessy, of the Canadian Pacific Railway, recently made an extended trip in the interests of his company to Central and Eastern Russia, and his report thereon was read to the meeting in which was shown some of the vast possibilities of trade between that country and Canada.

Perhaps the most noticeable feature of the occasion was the banquet at the Windsor Hotel tendered by the Montreal contingent to the visiting members and other guests, at which important addresses were made by Sir Wilfrid Laurier, Premier; Hon. W. S. Fielding, Minister of Customs; Hon. William Paterson, Minister of Trade and Commerce; Hon. J. I. Tarte, Minister of Public Works; Lord Strathcona and other distinguished gentlemen.

The Woolen Manufacturers' Section of the Association was largely represented and a lengthy conference was held by them which resulted in the preparation of a resolution which was quite fully discussed by the general meeting and adopted unanimously.

The text of this resolution was as follows:—"The request of the woolen manufacturers' committee is that you endorse their request to the Government for a net tariff, after the reduction of the preferential tariff, of not less than 30 per cent., or its equivalent, upon all classes of finished woolen, worsted and knitted goods and carpets, and of 20 per cent., or its equivalent, on all classes of woolen and worsted yarns." This is equivalent to an advance in the duty upon manufactured woolen goods of 45 per cent. gross or 30 per cent. net,

## The Canadian Manufacturer

**Reaches all the Blast Furnaces, Iron and Steel Works, Rolling Mills, Manufacturers of Iron and Wood-Working Machinery, Steam Engines and Boilers, Pumping and Mining Machinery, Electric Machinery and Appliances, Machinery Dealers and Steam Fitters' Supplies, all Hardware Dealers, Cotton, Woolen, Knitting and Yarn Mills, Pulp and Paper Mills, etc., in Canada.**

and on yarns of a duty of 30 per cent. gross or 20 per cent. net.

The following resolution as regards the tariff on sawn lumber or timber was passed:—"White pine, red (Norway) pine, hemlock, tamarack, spruce, Douglas fir, cedar, \$2 per thousand feet; shingles, 30 cents per thousand; laths, 20 cents per thousand. Government contracts should always use Canadian material when possible, and specify it in the contracts. That all the Provincial Governments be memorialized to insist that all timber sold by them be manufactured in the country."

The following resolution was also passed:—"The Manufacturers' Association urge upon the Government the necessity of changing the duty on oatmeal from an ad valorem duty of 20 per cent. to a specific of 60 cents per 100 pounds. Also that a duty of 6 cents per pound be charged upon lithograph covers on all package goods."

At a meeting of the agricultural implement section it was resolved to ask the Association to endorse their action in urging the Government to increase the duties upon agricultural implements.

The committee on the tariff on shirts, collars, cuffs and blouses reported that the only practical measure of relief in view of the present state of trade was to alter the present tariff; that compound duties be granted to this industry, namely, the ad valorem duty to be at the same rate as paid on their raw material, plus a specific duty of 24 cents per dozen on collars, 48 cents per dozen on cuffs, \$1 per dozen on shirts and \$1 per dozen on blouses. This was signed by the representatives of fourteen large shirt and collar factories.

The following resolution was passed:—"Be it resolved, that the Dominion Government be requested to change the present duty of 35 per cent. ad valorem to a specific duty of six cents per pound on all folding boxes."

A resolution was passed to the effect that the Association petition the Government to consider the necessity of granting an adequate degree of tariff protection to such new lines of manufacture as should be undertaken by the Canadian iron and steel producers.

The Committee on Valuation reported that they believed the following subjects to be deserving of the best attention of the Association:—"The necessity of the Government adopting better methods of securing information regarding the prices ruling in foreign markets, by means of a service similar to

that of the United States Consular service; also that there is great necessity of the Association using its influence to induce the Government to put a check on the present large importation of so-called job or imperfect goods, and overplus foreign productions, at less than standard value.

In its preparation of a statement of grievances laid before the Railway Commissioner appointed by the Dominion Government, the Railway and Transportation Committee emphasized the following points:—Opposition to the granting to competitive manufacturers in Great Britain and the United States of better rates than given to Canadian manufacturers from important shipping points like Montreal and Toronto; the unjust operation of several local rates as compared with through charges; the injustice of charging higher rates to western Ontario shippers to the seaboard than is charged to United States shippers from Detroit and Chicago when their freight passes over the same lines; and the unsatisfactory manner of dealing with claims.

In reference to the establishment of a direct line of steamships from eastern Canadian ports to South Africa and Australia, the committee reported in favor of the Government granting a subsidy, at the same time retaining control over freight rates. The committee also recommended the appointment by the Dominion Government of a permanent railway commission. In the discussion of the report of this Committee it was resolved that the Government of Canada be asked to pass legislation covering the question of the liability of all public carriers for all losses in transit, save that due to the negligence of the shippers themselves.

In the report of the Commercial Intelligence Committee the principal recommendation was favoring the establishment of a Canadian Consular system, the Committee believing that Canada should be adequately represented in foreign countries by permanent foreign offices, imitating in some respects, though not in its entirety, what is recognized as the most complete Consular system in the world, that of the United States. The Consular offices suggested are as follows:—London, Eng.; Sydney, Australia; Cape Town, South Africa; Yokohama, Japan; Kingston, Jamaica; Paris, France; Hamburg, Germany; Rio Janeiro, Brazil; Calcutta, India; Shanghai, China. The cost of these offices, the committee believed, would be about \$75,000 a year, from which might be deducted \$15,000 to \$18,000 already expended on commercial agencies.

The report of the special committee on the Labor Gazette stated that owing to numerous complaints the Executive refused to renew its subscription. The report objected to the definition of labor implied in the general character of The Gazette, complained that the system of gaining local information was not reliable, and stated that a monthly issue, as at present, is calculated to encourage the publication of much ephemeral stuff. Most of the members said that they threw into the waste-paper basket the slips asking for information, because they were too complicated, and asked for information to which The Gazette had no right. The report was adopted.

The following resolution re preferential trade was passed:—“Whereas the union of the Australian colonies into a great federal commonwealth has brought that country under the operation of a common tariff, and whereas this confederation will necessitate the adjustment of the tariff relations which have hitherto existed between this country and various colonies of Australia; and whereas the peculiar conditions which at present obtain throughout the Empire generally render the time particularly opportune for the negotiations of preferential trade relations amongst the great British self-

governing colonies; therefore be it resolved that in the opinion of this Association the Government of Canada should at once take steps to secure reciprocal preferential trade between this country and the Australian Commonwealth; and be it further resolved that this Association place itself on record as being heartily in favor of reciprocal preferential trade between Canada and every part of the British Empire with which arrangements can be effected to their mutual benefit, and by means of which each would receive substantial advantage as a result of its national relationship.”

The following officers were elected for the ensuing year:—President, Robert Munro, the Canada Paint Co., Montreal; vice-president, Cyrus A. Birge, the Canada Screw Co., Hamilton, Ont.; Ontario vice-president, W. K. George, the Standard Silver Co., Toronto; Quebec vice-president, J. J. McGill, Canadian Rubber Co., Montreal; New Brunswick vice-president, C. J. Osman, the Albert Mfg. Co., Hillsboro', N.B.; Manitoba vice-president, F. W. Thompson, the Ogilvie Milling Co., Winnipeg, Man.; British Columbia vice-president, J. Hendrie, the British Columbia Mills, Timber & Trading Co., Vancouver, B.C.; treasurer, George Booth, the Booth Copper Co., Toronto.

The selection of the next place of meeting of the Association was left to the Executive.

After the adjournment of the convention the Tariff Committee met Sir Wilfrid Laurier and other Ministers of the Government and presented a petition urging the increase in the tariff on woolen goods. Mr. Ellis, the late president, said afterwards:—“We have had a most satisfactory interview with the members at present in Montreal. In fact, I don't think our Association ever had a more pleasant conference with Ministers of the Crown. They showed the keenest interest in the matters under discussion and seemed to thoroughly appreciate the situation. Some of the bigger subjects, such as the increased duties on woolens, were not exhaustively discussed owing to the impossibility of completely covering the ground in the time at our disposal. We are well satisfied, however, with the conference.”

#### RECIPROCITY AND THE LUMBER INDUSTRY.

Reciprocity, The Detroit Free Press says, was the dominant note of a dinner given by the Detroit Merchants and Manufacturers' Exchange to the members of the Porto Rican delegation the other night—reciprocity not only with Porto Rico but also with Canada. Congressman John R. Corliss spoke on “reciprocity,” and in the course of his speech said the \$2 duty on lumber, while perhaps benefiting a few lumbermen, was a damage to the great masses of the people. This disposition to discuss reciprocity on the other side of the line is a cheering sign.—The Globe.

The United States Treasury Bureau of Statistics has recently published a compilation relative to the experience of that country with reciprocity in trade relations, attention being given to Canada in the years covered by the reciprocity treaty of 1854. This treaty, which terminated in 1866, and which included the time during which the war between the North and South was in progress, provided for the free admission into the United States from Canada, and from Canada into the United States of the following articles:—Breadstuffs, provisions, live animals, fruits, fish, poultry, hides and skins, furs, stone, ores and metals, timber and lumber, unmanufactured cotton, flax and hemp and unmanufactured tobacco, the list of articles being identical for each country. It will be noticed that timber and lumber are among the enumerated articles.

After the abrogation of the treaty, particularly under the McKinley and Dingley tariffs, the policy of the United States

was to exclude, by almost prohibitive duties, all articles grown or produced in Canada similar to such as are grown or produced in that country, at the same time showing a most cheerful willingness to admit duty free, such raw materials as saw logs and nickel ore and matte. The pine forests of Michigan and neighboring states having become virtually exhausted, states in which the saw mill industry had been most flourishing, recourse was had to the forests of Ontario, and for years the American mills produced lumber chiefly from Canadian logs. Under the circumstances it would have been but fair that Canadian lumber should find free ingress into the United States, but the political demands of the American lumbermen secured the imposition of a high duty on Canadian lumber. The Dominion Government took power to impose an export duty on logs, but never exercised it; and the Ontario Government, seeing the timber of the province being rafted away to Michigan mills, and Ontario mills thrown into idleness, a condition of general distress in the industry resulting therefrom, very properly, in 1898, enacted a law requiring that all timber cut on Crown lands in the province should be manufactured into lumber in the province. The demand for this embargo is apparent when considering the quantities of logs cut on Ontario Crown lands exported to Michigan, which were as follows, the figures indicating the number of thousands of feet, superficial or board measure:—

1891.....	feet	13,632,000
1892.....	"	39,073,000
1893.....	"	236,432,000
1894.....	"	174,503,000
1895.....	"	238,053,000
1896.....	"	249,746,000
1897.....	"	219,026,000
1898.....	"	157,000,000
1899.....	"	75,000,000
1900.....	"	13,513,000
1901.....	"	3,132,000

The logs cut during the winter of 1897-98 were permitted to be exported because operations in the forests had been begun before the passage of the law. The exports of 1899 were of logs cut the previous year that had been detained in streams because of low water. The exports of 1900 and 1901 were of logs cut on limits expressly exempted from the operations of the law. The quantity of logs cut on Ontario Crown lands in 1900 will aggregate more than 700,000,000 feet, all of which will be manufactured in Ontario mills; and thus it is that congressman John B. Corliss, of Michigan, and Michigan lumbermen generally, are of the opinion that the duty on Canadian lumber works a great damage to the American people.

The Globe thinks that the disposition of Michigan lumbermen to discuss reciprocity is "a cheering sign," but we do not see it in that way. They opposed reciprocity and insisted upon a prohibitive duty on Canadian lumber when they were towing hundreds of millions of feet of Canadian logs to their American mills, but now, when their supply of logs has been cut off, they are anxious for reciprocity.

The result of McKinleyism and Dingleyism as applied to lumber has been the practical ruin of the lumber industry of Michigan, and its transfer to Canada.

The more studiously Canada steers clear of "reciprocity" so called, the better it will be for Canada.

A Canadian Section of the Society of Chemical Industry of Great Britain has been formed in Toronto, with a membership of over 50, and the following Executive Committee appointed: H. Vander Lynde, Convener; A. Burton, Prof. Lang, F. J. Snail, W. H. Ellis, J. M. Sparrow, J. W. Arnott.

## WOOLEN MACHINERY.

Many of the newspapers of Canada and many of our manufacturers find much interest in the discussion of the question as to whether the preferential tariff is a substantial benefit to the country or otherwise, particularly as it affects the woollen industry. It is claimed by some that since the preferential tariff came into operation under which large quantities of woolsens have been imported into Canada, far in excess of what had been previously imported, and which had to a certain extent displaced Canadian made goods, Canadian capital and Canadian labor has been thrown into enforced idleness. There is no disputing this fact, be the difference regarding the cause what it may. It must be conceded that the imports of woollen goods have been largely increased; that there is great depression in the Canadian woollen trade, and that much woollen mill machinery, and many woollen mill operatives are in idleness. Canada is at this time in a most prosperous condition, and as far as our observation goes, the woollen manufacturing industry stands out alone as a sufferer. Every other industry flourishes. There is no abatement in the consumptive demand for woollen goods. The products of Canadian mills have heretofore found, as they now find, a good demand; and if the supply is decreasing—if the demand is being supplied from other sources—it is well to know the reason why.

We are told by the secretary of the Canadian Manufacturers' Association that within the past few years woollen machinery in Canada capable of producing \$2,750,000 worth of goods a year, has ceased to operate. The reasons assigned for this is the insufficiency of the tariff to restrain imports, resulting in the flooding of the market with the low priced goods of other countries, and a great reduction in prices. We are told by the manufacturers that the duty upon woolsens, even under the general tariff, is not sufficiently high, the situation being greatly aggravated by the preference shown British goods; and in this contention we are in full accord; but it is well to enquire if this is the only trouble that depresses the industry.

The conditions that attend the manufacture of woollen goods in Canada, aside from the tariff features of it, more nearly approach those of the same industry in the United States than of Great Britain or any other country. We have the same access to raw materials and greater freedom as to duty upon them, and we have as cheap labor; and yet we see the textile industry in that country in a most flourishing condition. Existing mills are in full operation, many of them working overtime, and new ones going up in all directions, against which we are confronted with the fact that Canadian machinery capable of turning out \$2,750,000 worth of goods per year is in idleness. At the recent convention of the New England Cotton Manufacturers' Association held in Buffalo, Mr. Albert Deabill, of Lowell, Mass., stated that at the present time there is no branch of the textile industry comprising a wider variety of fabrics than the knitting industry, since nearly every kind and form of wearing apparel can be produced on knitting machines; and in his opinion the rapid progress being made in mechanical inventions and improvements, and in the more intelligent expenditure of energy and capital, demonstrates that the knit goods made in the United States must take the lead in the race for business in the markets of the world. Year by year, he said, Europe has been sending a lessening quantity of goods to the United States until at the present time it is sending not more than 20 per cent. of the amount shipped there twenty years ago. Can it be said of Canadian mills that they have made rapid

progress in the use of mechanical inventions and improvements, and in the intelligent expenditure of energy and capital? Are Canadian mills equipped with the best machinery that can be had as American mills are? Is the Canadian machinery that is now thrown into disuse of modern make and capable of doing as good work and as economically as the machinery in use in American mills, or is it antiquated and out of date? What may have been first-class machinery a few years ago may not be worn out, but it cannot be classed otherwise than as second-class now. The manufacturer who employs up-to-date machinery is the one who stands the best chance of success. How much of this disused Canadian machinery could find place in any up-to-date mill?

#### THE TARIFF SUN SPOTS.

Commenting upon the recent meeting of the Canadian Manufacturers' Association, The Shareholder says it was natural that such questions as the tariff, reciprocity, insolvency, immigration, transportation, the preferential tariff, and the country's exports and imports should receive considerable attention; that these are matters which have a direct bearing upon the manufacturer's interests as well as upon those of other branches of the community; that were the interests and requirements of all the different branches alike the course of our legislators in framing laws and tariffs to suit them would be an easy one, but it unfortunately happens that such is not the case, and that in consequence it is impossible to frame laws and establish tariffs which would afford equal and complete satisfaction to all. The tariff as it now stands has its spots as well as the sun, but these spots are seen only by those upon whose individual interests they exercise what they consider a prejudicial influence, in the ventilation of which the claims of the consumers, who form by far the largest mass of the community, are completely ignored. In another paragraph our contemporary says:—"As regards immigration we commend to the Association the suggestion made by Hon. Mr. Tarte at the banquet that efforts be made to induce immigration and thereby increase the number of consumers of their products within the country itself."

The trouble with The Shareholder seems to be that it does not comprehend that the interests of the manufacturers—the producers—and of the consumers, meaning all the balance of the community are identical. It commends to the manufacturers that they should make efforts to induce immigration and thereby increase the numbers of consumers, and at the same time it tells us that when the manufacturers endeavor to remove the sun-spots from the tariff they completely ignore the interests of the largest mass of the community. For example:—one of the darkest sun-spots on the tariff is the insufficient duty imposed on woolen goods, aggravated and intensified by the preferential feature of it. Under the shadow of this dark spot what was once a valuable and flourishing Canadian industry is now in a condition of collapse. The Association tells us that since the tariff preference came into effect woolen machinery in Canadian mills, capable of producing nearly three million dollars worth of goods a year has been thrown into disuse. Does The Shareholder know what that means? It means that thousands of dollars worth of Canadian capital is unproductive, and thousands of Canadian workers are in idleness. Is not the non-manufacturing element of the country interested in this condition? Would it not be better to remove the sun-spot and allow the glorious beams of prosperity to shine alike upon all? How can any class in the community be happy

and contented when they see the misery around them of the thousands of woolen operatives thrown out of employment by the sun-spots? Of what benefit would it be to the woolen manufacturers to see increased by immigration the number of consumers of woolen goods in the country, if they are prevented from making the goods? The Shareholder seems to be enamored with the preferential tariff, thinking that it shows a proper and kindly feeling towards the Mother Country; but why should Canadian woolen operatives be starved to enable British manufacturers to fill our market with their products? No doubt every man, woman and child in Canada is to a greater or less extent adversely affected by the sun-spots on the tariff.

#### A CREAM SEPARATOR SUN SPOT.

A Canadian correspondent of Commercial Intelligence, of London, wrote to that journal calling attention to the opportunity of British manufacturers of cream separators selling their goods in this country. The writer says:—

I have a word to say about separators that I wish might meet the eye of every manufacturer throughout the United Kingdom.

In this great dairy country there is a splendid field for the manufacture of these machines. One result of the scientific dairying propaganda so energetically carried on throughout the Dominion, and more especially in Ontario, has been to convince the farmer that the separator is indispensable to his creamery. Large numbers are being sold each year. At least one English machine, is competing successfully with various Canadian and American makes, although the price asked for it is a trifle above the ruling figure. One of these machines with a capacity for 900 pounds per hour is doing good service in one of Toronto's largest dairies.

Those who represented this firm at the Toronto Fair assure me that there is nothing to stand in the way of successfully exploiting the Canadian market with the leading varieties of English separators. The freights are low and the duty not at all prohibitive, the preferential clause in the tariff rendering it still less than that collected on competing American manufactures.

The popular type is a separator with a capacity of 350 to 400 pounds per hour, hand power. Price should run about \$75 on time. A lower price would be a feature, as would greater ease in running. I may say that the price for several machines is higher than that mentioned. Separators are of very great utility to those engaged in the milk business in Canadian cities, enabling them to obtain cream for table purposes, for which it is used to an increasingly large extent. An average can, containing about eight imperial gallons, yields about one gallon of very heavy whipping cream, worth from seven to eight shillings. The wholesale price per can is about four shillings. The skimmed milk brings from one to three shillings. It pays better to sell the fresh cream in the city than to make butter. During the summer months immense quantities enter into the manufacture of ice cream. This is a lighter grade, bringing from three to four shillings to the gallon; and about seventeen gallons are used in making thirty gallons of ice cream.

The writer is mistaken in supposing that a duty is imposed upon cream separators imported into Canada; and this constitutes a sun spot in the tariff which ought to be removed. The imports of cream separators were valued in 1900 at \$216,953, of which only \$65,883 came from Great Britain; and in 1901 our imports were \$260,969, of which Great Britain sent us only \$61,079; and with the exception of only a few hundred dollars worth, the balance came from the United States.

There are a number of manufacturers in Canada who produce as good cream separators as can be bought abroad, and there is no good reason why the hundreds of thousands of dollars going out of the country for them every year should not be expended at home.

## AGRICULTURAL IMPLEMENTS AND FOREIGN TRADE.

What the real significance of the census returns is depends upon the point of view of the speculator; for instance, to the anti-British editors of New York it means that if Canada would be saved from some fearful but unspecified fate she must seek for permission to fly the Stars and Stripes instead of the Union Jack. Sentiment apart, we must admit we are too stupid to see the force of the argument, inasmuch as while the foreign trade of the United States is less than \$30 per head of population that of Canada is over \$70 per head. Perhaps when our southern neighbors have digested these figures and realize their significance they may think their commiseration was somewhat ill-timed. — Massey-Harris Illustrated.

Included in the foreign trade of both Canada and the United States is the export of agricultural implements from the first named country, and the import of the same implements into the other. The following shows the total value of imports of agricultural implements into Canada from the United States in the year 1900 and 1901:—

Articles.	1900.	1901.
Bindings attachments .....	\$52,218	\$29,966
Cultivators .....	18,130	16,038
Drills, seed .....	40,281	31,092
Farm rollers .....	149	2,049
Forks .....	9,373	4,461
Harrowes .....	63,789	47,833
Harvesters .....	806,979	827,928
Hay tedders .....	8,175	8,839
Hoes .....	3,078	2,854
Horse rakes .....	120,136	104,075
Knives, hay .....	367	281
Lawn mowers .....	5,078	5,305
Manure spreaders .....	4,187	4,921
Mowing machines .....	358,987	426,084
Plows .....	216,188	143,272
Post-hole diggers .....	204	197
Potato diggers .....	755	1,297
Rakes, n.e.s. ....	2,107	1,585
Reapers .....	23,887	57,265
Scythes, etc. ....	12,431	5,877
Spades and shovels .....	12,180	10,147
Weeders .....	2,102	457
All others, n.e.s. ....	56,965	129,774
<b>Total .....</b>	<b>\$1,797,676</b>	<b>\$1,871,597</b>

We are not of that optimistic temperament which allows us to see anything particularly desirable in the fact that the foreign trade of Canada is increased to the extent of nearly \$2,000,000 a year by the imports of agricultural implements alone. It is said of the Massey-Harris Co. that they are the largest manufacturers of agricultural implements under the British flag; and there are a large number of other such concerns in Canada, but they do not supply the home market however much they may strive to increase the volume of our foreign trade.

The foreign trade of Canada in agricultural implements, including imports and exports, in the years 1900 and 1901 was valued as under:—

Year.	Imports.	Exports.
1900 .....	\$1,797,676	\$1,692,155
1901 .....	1,871,597	1,742,946

## BARBED WIRE.

This journal is in receipt of an inquiry from the manager of a cattle ranch on the Island of Tobago, West Indies, for addresses of Canadian manufacturers of barbed wire, his desire being to purchase his supplies of the article in this country. One might reasonably imagine that among our many thriving industries there would be several engaged in the manufacture of barb wire, but upon inquiry our information is that the

Dominion Wire Mfg. Co., Montreal, is the only concern in Canada who make the article. Other concerns have heretofore been engaged in the business, but the placing of barb wire in the non-dutiable list squeezed the life out of this special industry. Wire fencing is subject to a duty of 15 per cent., but barb wire comes in free. In 1900 our imports of wire fencing were valued at \$82,868, of which \$626 came from Great Britain under the preferential tariff, the United States supplying the balance. In the same year our imports of duty free barbed fencing wire were as follows:—

Great Britain .....	\$18,329
Belgium .....	1,020
United States .....	456,318

Total .....

\$475,667

In 1901 the value of our imports of dutiable fencing wire was:—

Great Britain .....	\$808
United States .....	66,596
Other countries .....	139

Total .....

\$67,543

In the same year our imports of duty free barbed fencing wire were valued as follows:—

Great Britain .....	\$14,341
United States .....	302,328

Total .....

\$316,664

Great Britain as a competitor with the United States in the Canadian market for dutiable wire fencing, or duty free barb wire, is simply "not in it;" and the Canadian barb wire industry has its life squeezed out of it because of lack of tariff protection.

## THE NEW AUSTRALIAN TARIFF.

The Department of Trade and Commerce has received a copy of the new Australian tariff from Mr. J. S. Larke, Canadian Commissioner to the Commonwealth. Mr. Larke says:—"The time has been too short to consider the full effect on the trade of Canada, but so far as I have been able to judge I see little reason to alter the conclusions reached in my last report. As a whole, while the duties appear to be very high to a resident of New South Wales, accustomed for years to absolute free trade, they are below the average of the other colonies, and very considerably below those of Victoria. The one item of import from Canada that will be seriously affected is flour. A duty of £2 10s. per ton so long as Australia produces a surplus of wheat will, I fear, be prohibitory. Cotton goods bear a duty of 5 and 10 per cent., but these duties will have small effect on importation. Reapers and binders are for the present free of duty, but a duty may be laid when the Government deems it advisable to do so. Other implements bear a little lower average duties than under the colonial tariffs, New South Wales, of course, excepted. Boots and shoes and carriages are likely to be affected for the worse, and in these Canada was doing some trade, with a promise of more. The duties being mixed, specific and ad valorem, tells heavily against the cheaper lines, and will diminish importations. Apparel, bearing 20 to 25 per cent., will be more largely made at home. Printing paper not under 20x25 inches is taxed one shilling per cent., and other kinds at 15 per cent. Pulp for manufacturing paper is free. I doubt whether this will much affect imports of paper for some years. The duty of 25 per cent. on rubber boots and shoes in time will diminish importations, and in this branch of trade, which is becoming one of some extent, Canada may then suffer. In judging of the effect of the tariff in stimulating Australian

industries there must be taken into consideration these three points: On the one side the natural incidence of protection afforded to home manufactures by the relative great distance of Australia from the great producing centres, equivalent to from 10 to 15 per cent., and, on the other, the difficulty of getting skilled and efficient labor, and the fact that the tariff, being revenue-producing, levies, or proposes to levy, duties on raw material of manufacture, as timber, iron, food products, leather, paper, clothing, etc. There is a long free list. Of the total anticipated imports into the Commonwealth of £34,000,000 it is presumed that thirteen millions will be free goods. The Canadian trade embraces some lines that are proposed to be free, but not many. Among these are carriages, woodwork, cartridges, canvas, typesetting machines, typewriters, discs for plows and harrows, locks, traps and sewing silks."

#### EDITORIAL NOTES.

An esteemed correspondent writes us as follows: "A man may chin, and a man may work for the temperance cause all day; but he can't go a-fishin' and observe prohibition, because he ain't built that way." There are others; and the remarks apply equally to those who go a-huntin' also.

A telegram from London states that Sir A. Heine, Premier of Natal, South Africa, had, on a recent occasion, while making a statement referring to the prospects of the adoption by the Colonial Conference to be held next year of preferential tariff for British goods, said that he was entirely in favor of such a tariff provided Great Britain granted reciprocity, and that the other colonies agreed to the same policy. He pointed out that British free trade simply encouraged foreign commercial rivalry. The Premier expressed the hope that the subject would be thoroughly discussed at the forthcoming meeting of Colonial Premiers in London.

Hon. O. P. Austin, Chief of United States Bureau of Statistics, informs us that the entire series of reciprocity treaties and agreements made by the United States since 1850, and the pending unratified treaties from which the injunction of secrecy has been removed, are published in full in the September Summary of Commerce and Finance, recently issued by his Bureau. The fact that reciprocity is now and is likely to be during the coming session of the United States Congress, a subject of much discussion, and that the small number of these documents which he is permitted to print, should remind those who may possess them, and are interested in the subject, of their value as matters of reference. Information contained in an editorial in the last issue of this journal was obtained from this source.

A new candidate for public favor soon to appear will be The Trade Press, to be published quarterly by L. L. Cline, Detroit, Mich. The initial number is to appear during the current month, and it is to be devoted to the interests of trade journals. Mr. Cline says that other branches of journalism have their organs, most of them very successful ones, and nearly all of them have done much to belittle the influence of trade papers and the methods of their advertising patrons; and to correct ignorance and misconceptions in this particular is his excuse for launching The Trade Press. It is intended to interest advertisers—not only the man who constructs the advertising but also the man who pays the bills; and much space will be given to information regarding the various fields of trade, the nature of supplies consumed, the amount of trade to be had in various fields and how to reach it, conditions of trade, etc.

The Department of Trade and Commerce is in receipt of a report from Mr. G. E. Burke, Commercial Agent for Canada in Jamaica, in which he makes some interesting observations upon the conditions of trade between Canada and that colony. He points out that Canada still supplies but a small portion of the canned goods, textile fabrics and shoes consumed in Jamaica, owing, he says, to the inattention of manufacturers to local needs. The importations of Canadian butter continue to increase most satisfactorily, while the consumption of Canadian cheese shows a falling off, due to the local preference for smaller sized cheese than are put up in this country. It is pointed out that although a considerable quantity of Canadian-cured hams and bacon, after being shipped to England, is re-bagged and re-packed for the Jamaica market, only 35 pounds reached Jamaica direct from Canada. The Dominion, it appears, monopolizes the market for oats. In lumber and flour the United States producers continue to hold the market. In the matter of exports to Canada the insignificance of our direct importations of bananas and oranges, as compared with the large quantities imported through the United States, is strong proof, Mr. Burke says, of the necessity for improved steamship communication. He adds: "The Jamaica Government may yet be convinced of its short-sighted policy of false economy in not meeting the Canadian Government half way in a joint subsidy to a fast fortnightly line of up-to-date steamers." Mr. Burke strongly favors making St. John, N.B., a Canadian port of call, in addition to Halifax.

The Ontario Government has received and accepted the resignation of Prof. A. E. Shuttleworth, professor of chemistry at the Ontario Agricultural College, Guelph. Mr. Shuttleworth, it is understood, has accepted a good position as agricultural superintendent and chemist with the Ontario Sugar Co., who intend shortly to establish a factory in Ontario, probably at Berlin. Prof. Shuttleworth has given a good deal of attention to the subject of sugar beets during the last year or so of his work at Guelph, and has come into prominence in this connection. Professor R. Harcourt, who has been assistant professor in chemistry at the College, has been awarded the position vacated by Prof. Shuttleworth.

The Ontario Agricultural and Experimental Union has been fortunate in securing a promise from Dr. H. W. Wiley, Washington, D.C., to give an address at the Guelph Agricultural College on the sugar beet industry. Dr. Wiley is the chief of the division of chemistry of the United States Department of Agriculture, and as he has made a special study of the sugar beet industry there is probably no better authority on this subject on the American continent. As sugar beet growing in Ontario is now in its infancy the information which Dr. Wiley will be able to give will be greatly appreciated. This address will be given at the time of the annual meeting of the Experimental Union, and will likely take place in the convocation hall of the college, on Monday evening, December 9. As there will be cheap rates on the different railroads to the meeting of the Experimental Union and to the Provincial Winter Show, a great many people will have an opportunity to hear Dr. Wiley's lecture on a subject which is receiving so much attention in Ontario at the present time.

A study of the figures having reference to the imports of woolen goods into Canada in the four years during which the preferential tariff has been in operation is interesting. As heretofore shown in these pages the values and proportions were as follows:

Year.	Preferential Tariff.	Per Cent.	General Tariff.	Per Cent.	Total.
1898....	\$7,127,333	89.2	\$858,514	10.8	\$7,985,847
1899....	7,649,861	78.	2,153,336	22.	9,803,197
1900....	6,998,762	71.4	2,802,703	28.6	9,801,465
1901....	7,339,543	74.	2,604,572	26.	9,944,115

## CAPTAINS OF INDUSTRY.

The following items of information, which are classified under the title "Captains of Industry," relate to matters that are of special interest to every advertiser on these pages, and to every concern in Canada interested in any manufacturing industry whatever, this interest extending to supply houses also.

If a new manufacturing enterprise of any kind is being started, or an electric lighting plant instituted, or an electric railroad, or a telephone, or a telegraph line is being constructed; or a saw mill, a woolen, cotton, or knitting mill; or if any industrial establishment has been destroyed by fire with a probability of its being rebuilt, our friends should understand that possibly there may be something in the event for them. Do you catch on to the idea?

The starting of any such concern means a demand for some sort of machines, machinery, or supplies, such as steam engines and boilers, shafting, pulleys, belting, lubricants, machinery supplies, wood or iron working machinery, ventilating and drying apparatus; pumps, valves, packing, dynamos, motors, wire, arc and incandescent lamps, and an infinite variety of electrical supplies, chemicals, acids, alkalis, etc. It is well worth the while of every reader of the Canadian Manufacturer to closely inspect all items under the head of Captains of Industry.

News comes from Rat Portage, Ont., that an English company has been formed and all the capital necessary subscribed to build a large flour mill with a capacity of 3,500 barrels per day for export, at Tunnel Island near that place.

H. R. McLellan, St. John, N.B., has the 4,400 cords of wood cut, that he contracted to get out for the Clergue company.

The Moore Electrolytic Co., Boston, Mass., has leased the rights to manufacture bleaching powder, caustic soda, etc., to the Imperial Electrolytic Co., of Canada, who will put in a plant at Shawinigan Falls, Que.

Water has always given more or less trouble in the filtering of waste oil. The Burt Mfg. Co., Akron, Ohio, have perfected an attachment for their Cross oil filters which successfully overcomes this difficulty—an improvement which makes an already good filter better.

The Berlin Furniture Co., Berlin, Ont., has been incorporated with a capital of \$50,000, to manufacture furniture. The provisional directors include W. F. A. Wilson, J. E. Jacques and S. M. Smyth, all of Berlin.

An Ontario Government Commission are engaged in examining the waterways in and about Lake Minnetakie and Lac Seul in new Ontario, in the district tributary to Dinorwic, with a view to ascertaining the cost and feasibility of

improving navigation on these lakes in connection with the proposed C.P.R. extension from Dinorwic to Lake Minnetakie. The work of locating this line is being pushed ahead rapidly, some seven or eight miles having already been covered. Construction work is expected to commence in the spring.

An agreement has been entered into between the Canadian Electric Light Co. and the Quebec Railway, Light & Power Co. of Quebec, whereby the Canadian Electric Light Co. has leased 1,000 electrical h.p. for a period of five years. The consideration is a payment to the Canadian Electric Light Co. of about \$15,000 a year and that the latter company is not to make any installation in the city of Quebec during the term of the contract. The contract is valuable to both companies.

The Royal Aluminum Co., Shawinigan, Que., has been incorporated with a capital of \$500,000, to manufacture bronzes, etc. The provisional directors include G. G. Foster, S. G. Archbald and S. F. Belknap, all of Montreal.

The Meriden Hydrocarbon Arc Light Co., Toronto, has been incorporated with a capital of \$15,000, to manufacture light and power. The provisional directors include W. J. Douglas, F. Diver and N. Marshall, all of Toronto.

The Gee Electrical Engineering Co., Toronto, has been incorporated with a capital of \$10,000, to manufacture elec-

trical machinery. The provisional directors include Wm. Gee, G. A. Harper and W. H. Hunter, all of Toronto.

The McClary Mfg. Co., London, Ont., whose present assessment expires early in 1902, are asking the council of that city to procure legislation from the Ontario Government limiting the company's assessment to \$150,000 per year for not less than ten years. Failing to secure special legislation, the company will feel obliged to move their headquarters to Quebec, where, they claim, the taxation on personality would be only one-twentieth what it is in this province. The company last year, paid out \$250,000 in wages. The Finance Committee and the City Solicitor will take up the matter.

A new building 55x40 feet, three storeys high, will be erected by the Union Bank at Alexandria, Ont.

The Ottawa Young Men's Christian Association will erect a building to cost about \$100,000.

The council of Sydney Mines, N.S., will install an electric light plant for public lighting.

The World Furniture Co., Orillia, Ont., will erect a brick factory 120x45 feet, three storeys high.

A proposition has been made to the council of Chatham, Ont., by the Wallaceburg Beet Sugar Co., to erect a factory at that place.

The B. F. Sturtevant Co., Boston, Mass., has upon the press a catalogue or, more properly, a treatise upon the Sturtevant steam hot blast apparatus and dry kilns. The process of drying is thoroughly discussed in a purely technical manner and from this discussion are drawn manifest conclusions as to the advantages of the blower system of drying. The treatise relates principally to the drying of lumber and illustrates different forms of kilns, methods of piling, etc. It will be a valuable addition to the decidedly limited literature on this subject.

The Syracuse Smelting Works, Montreal, have recently secured a large order for Babbitt metal to be shipped to Holland. The Dutch-Boer element in Holland don't like their British neighbors

## Pneumatic Tools and Appliances ARE GREAT MONEY SAVERS.

Air Hoists,  
Baggage Hand-  
lers, Agitation  
of Liquids or  
Syrups in Re-  
fineries.  
Cushion and Car-  
pet Cleaners,  
Chipping Tools  
for use by Ma-  
chinists, Boiler  
Makers, Stone-  
cutters and  
Marble Works.  
Calking and Drill-  
ing, Air Brushes

**INGERSOLL-SERGEANT**  
PISTON AIR COMPRESSORS FOR ALL DUTIES  
INLET

**THE JAMES COOPER MFG. CO. LIMITED**  
299 St. James St., Montreal

BRANCHES . . . ROSSLAND, B.C. RAT PORTAGE, Ont. HALIFAX, N.S.

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

Pneumatic  
Augers,  
Punches,  
Hammers,  
Rammers,  
Rotary Drills,  
and Augers.  
Reversible  
Boring Machine,  
Flue Cutters,  
Rollers and  
Welders,  
Air Lift Pumps,  
Jacks,  
Paint Spreaders,  
Bolt Nippers.



but they know a good thing when they see it, and therefore buy Canadian metal.

The Robb Engineering Co., Amherst, N.S., has received an order, through Ahearn & Soper, Ottawa, for a 100 h.p. engine for the Government quarantine station at Grosse Isle, Quebec.

Work is rapidly progressing upon the foundations for the new plant of the B. F. Sturtevant Co. at Hyde Park, Mass. The buildings, including storage space between, will occupy a tract measuring in extreme dimensions about 700x500 feet. This will provide space for the foundry, pattern and pattern storage building and power plant as well as the machine shop, 500x120 feet, and a three storey structure of the same length, both terminating in a large head house which will serve for the work of erecting, testing and shipping. The office will be a separate building of considerable dimensions.

The Canadian Skewer Co., Toronto, of which Mr. Arthur Gate is manager, informs us that the demand for the skewers made by them exceeds their ability to supply because of insufficient factory space, and they are now endeavoring to obtain larger quarters in which to carry on their business, either in Toronto or elsewhere.

In view of the greatly increased summer traffic on the Muskoka lakes, the Ontario Government have decided to enlarge the lock at Port Carling, connecting Lakes Muskoka and Rosseau. In order to have it completed in time for navigation next summer, the work will be proceeded with at once. The present length of 133 feet will be increased to 170 feet. The cost is estimated at \$12,000. As the work is wholly local, and affects several municipalities, who have urged that the improvement be made it is within the jurisdiction of the Provincial authorities. It is understood that the steamboat companies contemplate enlarging their vessels to keep pace with the improvements in the railway and hotel services.

The Ontario mineral exhibit, which attracted so much attention at the Pan-American Exposition, is to be kept intact and exhibited at various places in Canada and probably abroad. Some time ago the Industrial Exhibition Association

suggested to members of the Ontario Government that they would like to have the mineral exhibit shown at the next industrial exhibition. Since that time the Government secured the consent of those who donated minerals to the exhibit to keep the display together. The idea the Government has in mind is to place it in the mineral building at the fair, if one is erected, the coming year, and send it on to other exhibitions, that may request it.

Mr. L. Sapery, of the Syracuse Smelting Works, Montreal, has returned to Canada from an extended trip through Europe in the interests of his company.

The Railroad Gazette of August 30, presents an interesting photograph of the west portal of the Elkhorn tunnel on the Norfolk & Western Railway, which clearly shows the Sturtevant fans upon either side of the entrance arranged in such manner as to create an induced flow of air which serves to ventilate the tunnel in a degree of success never before accomplished in a passage of this character.

The United States Bureau of Foreign Commerce has received a letter from J. P. Spanier, 160 Corso Umberto, Rome, dated October 2, 1901, stating that he wishes manufacturers of cellulose (wood pulp) in the United States informed that he is desirous of receiving samples by mail, and prices c.i.f. Genoa. If quality and price are suitable, he can take several thousands of tons annually. This is a pointer for Canadian makers also.

The necessity of elevator inspection in Toronto was discussed a few days ago by Ald. Ward, Sheppard and Urquhart, a sub-committee, of the Civic Property Committee, with the result that a resolution was passed recommending that a by-law be prepared for the purpose of making licensing and inspection of elevators compulsory, and a competent person for the purpose be appointed under the control of the City Commissioner. It was further recommended that an annual license fee of \$2 be charged for each elevator. There are one thousand elevators in this city, said Ald. Ward, and many of them are run by chains and ropes encased in woodwork in the walls. An expert elevator man who was called in to make repairs told me that in one case it had been fourteen years since the

elevator had been inspected or repaired, and he found the chains reduced to the thickness of a shoe lace. The alderman estimated that from 50,000 to 60,000 passengers were carried daily by Toronto elevators. Many elevators, particularly at the rear of warehouses, which were used for employes and merchandise, were in bad conditions; in fact, in his opinion nine out of ten of the latter class were unsafe and otherwise unfit for use.

Lindsay, Ont., will erect a new fire hall, at a cost of about \$5,000.

Berlin, Ont., will grant a bonus of \$20,000 for a beet sugar factory.

The Union Trust Co., Toronto, will erect a tenement building 100x100 feet, seven-storeys high, at a cost of about \$100,000. The building will be lighted by electricity manufactured on the premises.

The Eaton Bros.' Brewing Co., Owen Sound, Ont., has issued an attractive booklet, profusely illustrated, explanatory of the new pneumatic malting plant which they have just erected. The description is exceedingly interesting, and gives a good idea of the economy and cleanliness of the process. The company have now an annual malting capacity of 240,000 bushels.

Messrs. Selby & Youlden, Kingston, Ont., founders, are asking to have their assessment placed at \$10,000. They expect to enlarge their works and go extensively into manufacturing.

The richest find of molybdenite yet reported to the Ontario Bureau of Mines was announced recently by Mr. J. E. Webber, Toronto, whose claim is situated at Norland, near Cobocok, Ont. Mr. Webber says the deposit is a very large one, while the sample brought to the Bureau was of exceeding richness. Many inquiries have been received by the Bureau, and should this deposit prove extensive on development, a profitable industry should ensue. Molybdenite is used chiefly as an alloy in the manufacture of steel, and also for making molybdc acid.

The Steamer Richelieu has been placed in the Government dry dock at Kingston, Ont. She recently sank in 65 feet of water at the foot of Lake Ontario in a very exposed place. There are only two

# Transfer Ornaments

AND PERMANENT OPALESCENT WINDOW SIGNS,

TRADE MARKS, DECORATIONS, NAME PLATES, ETC.

For HARDWARE, BICYCLES, VEHICLES, POTTERY, FURNITURE, etc.

Sketches and samples submitted free of charge. Being American manufacturers enables us to make prompt delivery. Write us.

**THE MEYERCORD CO., Inc.,** CHAMBER OF COMMERCE, - CHICAGO,

-MAIN OFFICE-

Largest Makers in the World of Guaranteed Decalcomania Transfers.

Canadian Travelling Representative,  
CHAS. H. JAGGER, Hamilton, Ont.

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

AMERICAN MADE.

Guaranteed Quality.

places on the hull that will require patching. Selby & Youlden repaired the hull. Her upper works are badly damaged and will have to be replaced, at a cost of from \$2,500 to \$3,000. It is expected that in a couple of weeks the steamer will be fully restored.

The Canadian Niagara Power Co., Niagara Falls, Ont., will install generators of 10,000 h.p. capacity, which will be placed in the new station of the Niagara Falls Power Co., over wheel-pit No. 2. There will be eleven of them, giving a total capacity of 55,000 h.p.

George Johnson, Dominion statistician, keeps in close touch with the paper and pulp industry, and from the statistics which he has received he estimates that the capital invested in pulp mills (as distinct from paper mills) in Canada amounts, at the present time, to not less than \$20,000,000. The total annual product of the mills is estimated at 300,900 tons of mechanical pulp, and 169,800 tons of chemical pulp, the former

valued at \$10 and the latter at \$30 a ton, making a total value of over \$8,000,000. The amount of pulp wood consumed for the quantity of wood pulp stated is 970,000, cords a year. These calculations are based upon the stated capacity of 44 Canadian mills from which returns have been received.

The paper manufacturers of England have at last become thoroughly aroused to the necessity of providing themselves with pulp, independent of their dealings with the Scandinavian manufacturers, and many of them have already entered into contracts for the purchase of pulp from Canadian mills. Six or seven years ago it was predicted in these columns that within ten years the paper industry of England would turn from Scandinavia to Canada for its supply of raw material, and that in the natural order of things, soon afterward English capital would be invested in large amounts in the manufacture of paper in Canada. Such appeared to be the course of evolution in the industry. As time goes on, this pre-

dition is becoming verified. The English manufacturers are tired of submitting to the trade customs, trade regulations and the arbitrary methods of Scandinavia, and now that they have learned that Canadian pulp is good pulp and suitable to their needs, they are preparing to purchase their supplies from a country closely allied to their own, rather than from one that is entirely foreign. The imports of pulp into England from Scandinavia have decreased very materially of late, while those from Canada have increased very largely. Unless something unforeseen occurs, the time is not far distant when England will purchase nearly all its pulp from this side of the Atlantic. The growth of the Canadian pulp industry, and also of its paper industry, should be very rapid in the near future.—The Paper Mill.

Information from Great Britain is to the effect that Birmingham medalists complain that very few orders reached them from the colonies for medals commemorating the tour of the Duke and

**CAMEL BRAND** ..... **BELTING**  
**BALATA** . . . . .  
**RUBBER** . . . . .  
 Linen Fire Hose,  
 Water and Steam Hose,  
 Packings, Etc., Etc.

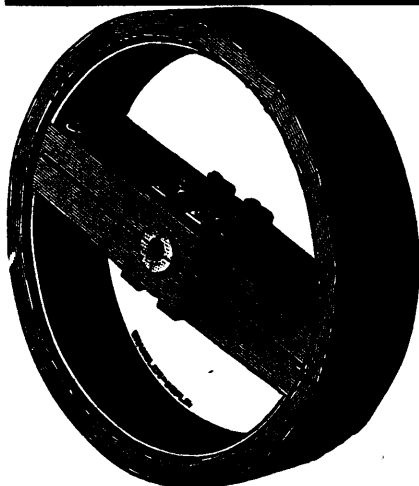
**THE STANDARD**



**GOLD WATER PAINT**  
 WEATHER PROOF, FIRE PROOF  
 WHITE AND COLORS.

**MILL SUPPLIES**  
 Lubricating Oils and Greases  
 PAINT, PAINT OILS, ETC.

**W. A. FLEMING & CO.**  
 Montreal and St. John, N.B.



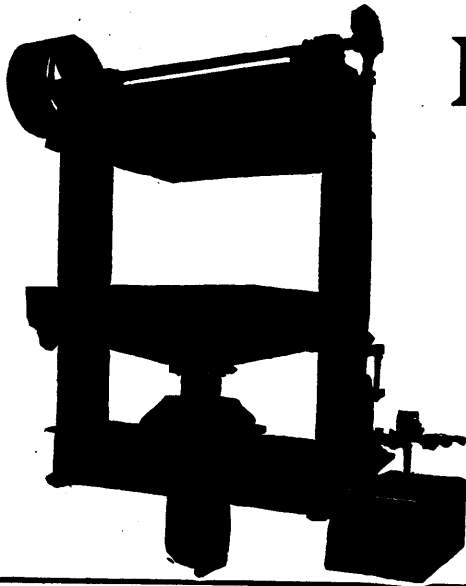
**“The Reeves”** A HIGH GRADE  
 Wood-Split **PULLEY**  
 BUILT HONESTLY  
 BUILT RIGHT

It Does the Work. No Trouble. No Worry.

SEND FOR CATALOGUE

**REEVES PULLEY MANUFACTURING CO., Limited**  
 14 Pearl Street, - Toronto, Ont.

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.



# Hydraulic **PRESSES**

We Build Presses  
for...

**PRESSING VENEERS**

**TANNERS' USES**

**BALING, Etc.**

SEND FOR  
CATALOGUE  
AND PRICES

## William R. Perrin & Company

TORONTO, - CANADA

Duchess of Cornwall and York. As it is known that very large numbers of such medals have been circulated, it is concluded that they were chiefly supplied from Germany. Mr. Chamberlain, who represents the constituency in which the Birmingham jewellery quarter is situated, will be asked to present a petition to the King, praying His Majesty to cause some regulation to be promulgated requiring foreign-made medals and similar articles to have their country of origin indelibly marked upon them. The petition is being promoted in anticipation of a large demand for medals commemorative of the coronation. It is claimed that German firms are already engaged in striking medals in various metals for sale in Great Britain at the time of the coronation. In other words these British jewellery manufacturers desire protection of the most drastic character for their products, but insist upon the observance of absolute free trade as far as all other products is concerned.

Mr. Robert S. Reid, a merchant doing business in Port au Spain, Island of Trinidad, West Indies, was in Toronto a few days ago, and while here, speaking of the possibilities of trade between that island and Canada, stated that Canadian trade with the British West Indies, particularly in the Island of Trinidad, with which he is more familiar, is steadily increasing. Within the past few years, in fact, that

trade has grown to such an extent as to create a feeling of jealousy among United States exporters, who had held a close grip on the trade of the island. For instance, Canadian flour was in growing demand, and there was no reason in the world why Canadians should not soon be paramount in this line, instead of holding a secondary place, as at present. Canadian cheese, butter and potatoes were in growing demand throughout the British West Indies, and the cheese trade, he thought, would in the near future be absolutely controlled by Canadians. One or two cargoes of inferior butter from Canada, due to improper methods of packing, had somewhat offset the demand for that product. So long as the butter was good it would find ready sale, but Canadian dairymen would do well to remember that they had to compete against Danish butter of the finest quality, and mistakes would mean heavy loss. Canadian furniture and manufactured goods were winning good markets throughout the islands. The sentiment of the people was strongly in favor of Canadian products, as against those of the United States and other foreign countries, and an advantageous treaty between the Dominion and the islands was a probability of the near future. With the exception of the cane sugar industry, the industries of the British West Indies were in a flourishing condition, and a

good and growing trade in cocoa, cacao nuts, fruits and other products was being built up with Canada.



Sealed tenders, addressed to the undersigned, and endorsed "Tender for Observatory, Ottawa, Ont.," will be received at this office until Wednesday, November 27th, inclusively, for the erection of an observatory building at the Central Experimental Farm, Ottawa, Ont., according to plans and specifications to be seen at the Department of Public Works, Ottawa.

Tenders will not be considered unless made on the form supplied and signed with the actual signatures of tenderers.

An accepted cheque on a chartered bank, payable to the order of the Minister of Public Works, equal to ten per cent (10 p.c.) of the amount of tender, must accompany each tender. This cheque will be forfeited if the party decline the contract or fail to complete the work contracted for, and will be returned in case of non-acceptance of tender.

The Department does not bind itself to accept the lowest or any tender. By order,

FRED. GELINAS,  
Secretary.

Department of Public Works, Ottawa, 6th November, 1901.

Newspapers inserting this advertisement without authority from the Department will not be paid for it.

## CONTRACTORS, ATTENTION!

If you are excavating in stone, use

# THE "LITTLE GIANT" ROCK DRILL

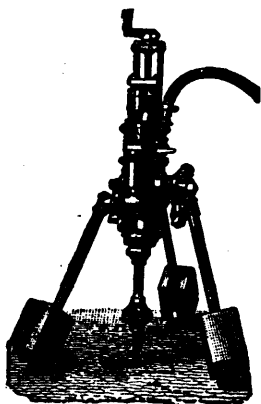
... NINE SIZES ...

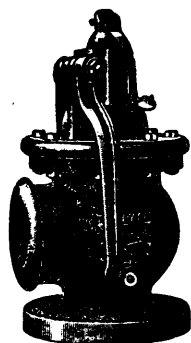
*Adapted for Steam or Air*

## THE CANADIAN RAND DRILL COMPANY

SHERBROOKE, QUE.

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.





A VALVE YOU CAN RELY ON  
SEND FOR PRICES

## CROSBY STEAM APPLIANCES EXCEL

Steam Engine Indicators.  
Recording Gages.  
Revolution Counters.  
Pressure and Vacuum Gages.  
Lubricators, etc.

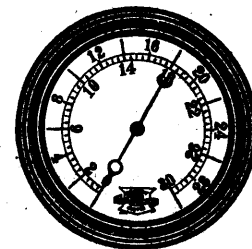


Stationary and Marine Valves.  
Water Relief Valves.  
Blow-off Valves.  
Globe and Angle Valves  
Single Bell Chime Whistles.

SEND FOR CATALOGUE

**CROSBY STEAM GAGE and VALVE CO.**  
BOSTON, NEW YORK, CHICAGO, LONDON

A TRUTHFUL GAGE IS THE ONLY GOOD GAGE



Wm. Kerns & Co's grain elevator at Burlington, Ont., was destroyed by fire November 9, together with about 10,000 bushels of grain. Loss about \$10,000.

Tenders are being asked for the new astronomical observatory, which is to be located near the southwest gate of the Experimental Farm at Ottawa. The building will be of Nepean sandstone, with facings of Credit Valley stone of a darker hue. It will in general contour resemble the arc of a circle. It is to be two storeys high, with a basement. At the back and in the middle of the building the revolving dome for the big telescope is to be located. "The telescope will stand on a concrete foundation 50 feet high. The building is to be about 120 feet by 60 feet. In the basement there will be clock record and pendulum chronometer rooms. There will also be a room for standards and testing, and workshops and heating ap-

pliances. On the ground floor there will be astronomers', directors' and computers' rooms, and a room in which time records will be taken. On the next floor there will be a photographic department, and also a large lecture-room. Underneath the dome there is a central hall on the ground floor, and on the next floor a museum.

With the compliments of the Hon. Clifford Sifton, Minister of the Interior, we are in receipt of an atlas of Western Canada showing maps of the several provinces and districts composing the Dominion of Canada and of the world. It is accompanied with an illustrated description of those portions which offer new homes to intending settlers, and contains a large amount of instructive and interesting information which should be in the hands of all those who desire to ascertain in a reliable and authoritative form what

the real facts are in regard to the inducements to immigration offered by this country. The illustrations show what has been done by others and should not fail to invite new ones to make their homes where industrious labor will meet with encouragement and reward.

A deputation from Hastings county, Ont., waited upon Hon. W. S. Fielding and Hon. James Sutherland at Ottawa a few days ago and urged the Government to grant a bonus in aid of the production of arsenic. The delegation was headed by Mr. Joseph James. The Ministers asked them to submit their views in writing. Mr. James says the chief source of supply for arsenic in Britain is practically exhausted, and the article does not exist in the United States to an extent that would render its production for commercial purposes feasible. There are, however, enormous deposits of mispickel in

**SOME HAVE LEARNED THAT IT IS DANGEROUS TO SIMPLY ORDER**

**"A Wood Split Pulley"**

And are particular to specify

**"DODGE"**

when ordering, so as to get the best at same cost as other makes.

**It's as well to have THE BEST** when you are buying.

Remember **"Dodge"** THE

80% of the Buyers do. Do You?

260-PAGE CATALOGUE MAILED FREE.

**DODGE MANUFACTURING CO., Toronto, Ont.**

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

Hastings county and elsewhere in Canada, and arsenic of a superior quality can be extracted from the ore more cheaply here than in any other country. The importations of arsenic into Canada and the United States amount annually to about 6,000 tons, and the granting of a bounty would enable Canada to secure this trade. A bounty is needed, Mr. James thinks, in order to secure the necessary capital to start the industry. Arsenic is worth about \$80 per ton.

The steam saw mill of Messrs. Blackador & Co., at Hectanooga, N.S., has been destroyed by fire. Loss about \$10,000.

The contract for the Carnegie Library building in Vancouver, B.C., has been let, the price being \$40,200.

Messrs. Lequime & Powers, Midway, B.C., are building a saw mill at Smelter Lake, with a daily capacity of 40,000 feet.

Galt, Ont., will erect a factory for the Royal Carpet Co., the company paying four per cent. on \$7,000 for ten years, and at the end of that time will be allowed the privilege of buying the property.

The Toronto Furnace & Crematory Co., Toronto, have completed the erection of a crematory plant for the city of Winnipeg, Man.

J. C. Wilson & Co., Glenora, Ont., will ship to the village of Hanover, Ont., in a few days one 33-inch and one 21-inch

vertical Little Giant turbines, 35 feet draft, 45 inch diam. steel pinstock with Y connection at the wheels, and the necessary shafting, gears, babbitted bearings, etc., to be used in the improvements of the village's light and water plant.

The dispute between Edward Lloyd, Limited, of London, England, and the Sturgeon Falls Pulp Co., Sturgeon Falls, Ont., has been adjusted. Edward Lloyd, Limited, will reconvey to the Sturgeon Falls Pulp Co. the whole of the property which they bought, in addition to paying damages to the amount of £102,417, 19s., 7d., and if the pulp company so desire, will purchase the entire output of paper at Sturgeon Falls for a period of two years from the time of the mills starting up. It is expected the pulp company will have the first mill ready for operation by January 1, when the output will be 40 tons of paper a day, and when the works are completed the capacity will be 120 tons per day.

The town of Neepawa, Man., has recently closed a contract with Messrs. J. C. Wilson & Co., Glenora, Ont., for one 28-inch vertical wheel and the necessary shafting, gears, iron bearings, etc. These are to be used in the improvement of the town's water system.

The Nova Scotia Steel & Coal Co., New Glasgow, N.S., will erect a large new shipping pier at North Sydney. The material required will include 850,000 feet of hard pine, 21,000 lineal feet of creosoted piling, 300,000 feet spruce

planking, and 45,000 tons of iron. The total cost will be about \$120,000. The length of the pier will be 1,400 feet, from which it will be possible to ship 15,000 tons a day.

The Canadian Power Co., Montreal, has been incorporated with a capital of \$25,000 to manufacture electricity, etc. The provisional directors include R. Millar, Montreal, and V. V. Rogers and V. H. Lyon, of Ottawa.

The Ontario Graphite Co. have completed their new factory on Whitefish Lake, Renfrew county, which is 87x46 feet, four storeys high. The company is developing water power on the Madawaska river with which to operate the mill.

The new women's residence to be erected in connection with Victoria University, Toronto, will be 140x55 feet, three storeys high, and cost about \$50,000. The building will be of cut stone and pressed brick, and of the English college style of architecture.

The Toronto Street Railway Co's receipts for October show a remarkable increase, partly due to the traffic during the Royal visit. The growth of the company's revenue and the city's percentage of the same is illustrated by this table:—

	Receipts.	Percentages.
October, 1901 ....	\$152,453.37	\$12,196.27
October, 1900 ....	124,866.00	9,989.28
October, 1899 ....	111,485.75	8,918.86
October, 1898 ....	99,885.05	7,990.80

# STOP!

ARE YOU INTERESTED IN

## Engineers' Supplies?

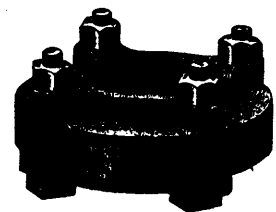
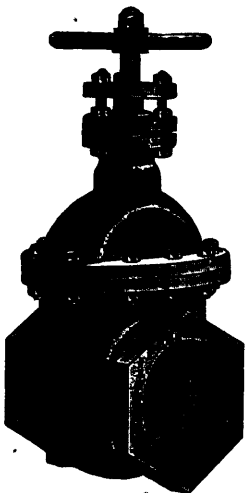
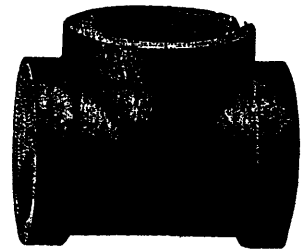
IF YOU ARE WE WOULD LIKE YOU TO GIVE US A TRIAL ORDER

WE KEEP A LARGE SUPPLY OF

**BLACK and GALVANIZED PIPE,  
IRON and BRASS VALVES,  
CAST and MALLEABLE FITTINGS,  
STEAM TRAPS and RADIATOR VALVES,  
SAFFORD STEAM and HOT WATER RADIATORS,  
STEAM and HOT WATER BOILERS**

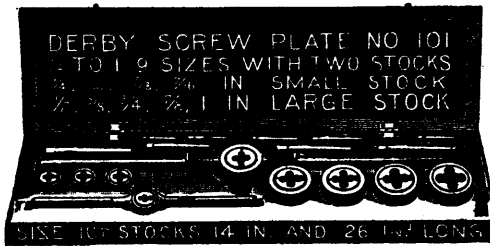
We can forward goods same day as we receive orders. Write for Latest Price List.

**THE DOMINION RADIATOR COMPANY, Limited,  
TORONTO, ONT.**

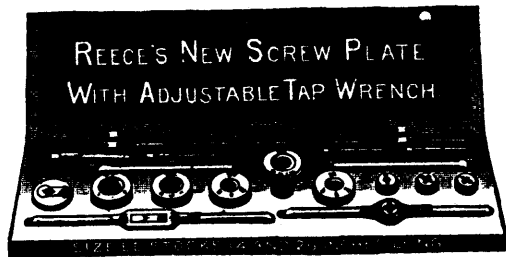


When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

The universal satisfaction given by our **DERBY** and **REECE SCREW PLATES**, cutting from 1/16 to 1/2 inch, including all the machine screw sizes, has created a demand for a plate made on the same principle, to cut bolts to 1 inch in diameter. To meet this demand we have brought out these sizes.



**BICYCLE SCREW PLATES, REECE SCREW PLATES, DERBY SCREW PLATES, BLACKSMITH'S STOCKS AND DIES, BLACKSMITH'S IMPROVED SCREW PLATES, HAND TAPS, MACHINE TAPS, PIPE TAPS, EVERY KIND OF TAPS AND DIES.**



## BUTTERFIELD & CO., - Rock Island, Que.

The Dominion Coal Co., Sydney, N.S., will erect a large passenger steamer next summer. The shipment of coal to the St. Lawrence will be discontinued for the winter on November 15, and the large steamers now employed in that service will be used to carry coal to Europe. Another big shipment of coal will be made next month to Norway.

We are informed that Mr. Wm. M. Preston, representing an Ohio concern, has in contemplation the starting of a factory at some point in Ontario not yet decided upon, for the manufacture of taps and dies, and other similar articles.

The Montreal Transportation Co., have added to their fleet four new boats, capable of carrying in the aggregate 204,000 bushels of grain. Two of these are new vessels, one of which was built at Levis, Que., by Carrier, Laine & Co. They are both 206 feet long over all, 41 feet beam and 17 feet depth of hold. There are seven hatches 20 x 8, and, with 72,000 bushels of grain on board, the draft will only be 13 feet.

The Canadian Refinery Co., Petrolia, Ont., refiners of crude oil, started business at their works last week. New boilers, stills, condenser, bleaching tanks, and agitator are all in position, and stills for lubricating oils and paraffin are being installed.

The buildings of the National Portland Cement Co., Durham, Ont., are being constructed of cement block. The factory at Durham is the second of its kind built in the world that will take the raw mat-

erial from its resting place and carry it through the entire process of manufacture and place it in the bag or barrel without the aid of human hands. From one thousand to thirteen hundred barrels will be turned out daily.

The Ontario Deputy Minister of Agriculture, Mr. C. C. James, has received advices that several contracts have been made with beet sugar firms for next year's crop by farmers in Western Ontario. By that time it is expected there will be factories in existence to consume the Ontario output. In the past those who have successfully grown the beet have had to find a market in Michigan.

Messrs. Shurly & Dietrich, Galt, Ont., have manufactured two sets of fork rolls weighing 8,000 pounds each, for the Maple Leaf Harvest Tool Works. Another machine weighing 13 tons is now being manufactured by them for rolling hoes.

The Montreal-Longueuil Bridge Co., Montreal, have applied for incorporation to build a railway, tramway and passenger bridge across the St. Lawrence river between those places.

The Consumers' Electric Co., Ottawa, Ont., has been incorporated with a capital of \$300,000 to manufacture electricity for any purpose. The provisional directors include R. Blackburn, H. Robinson and W. C. Edwards, all of Ottawa.

The factory of the Cumberland Furniture Co., Oxford, N.S., was destroyed by fire November 6. Loss about \$20,000.

A number of the members of the Berlin Board of Trade are inspecting the Beet

Sugar Refineries at Bay City and Caro, Mich.

The Radford Paper Co., Montreal, has been incorporated with a capital of \$2,000 to manufacture pulp and paper. The provisional directors include T. H. Radford, E. M. Roberts and D. Yuille, all of Montreal.

The Campbell Mfg. Co., Montreal, has been incorporated with a capital of \$75,000 to manufacture clothing. The provisional directors include F. R. Lanigan, W. H. Butters and B. W. Beyer all of Montreal.

The flour mill of The Woodburn Milling Co., Woodstock, Ont., was destroyed by fire November 4. Loss about \$16,000.

Alex. McDonald, Esq., lumber and pulp dealer, Melbourne, Que., is placing a 24-inch vertical Little Giant in his mill at that place. J. C. Wilson & Co., Glenora, Ont., are the manufacturers.

During the past week Messrs. Lowrey and Dean, of The T. Eaton Co., Toronto, have been in the city, endeavoring to fix upon a location for a branch of that firm's manufacturing business in Hamilton. Some months ago it was said that the Eaton Co. would move its whole manufacturing business to Hamilton because of a dispute with the Toronto assessment authorities. Nothing came of the talk, however, and the incident was forgotten. The announcement is now made that the company has secured control of the James Simpson premises, Rebecca street, and that next week work will be

## THE BEST PIPE THREADING and CUTTING-OFF MACHINES

Are Made by the **ARMSTRONG MFG. CO., BRIDGEPORT, CONN.**

Also Manufacturers of a FULL LINE of **ADJUSTABLE STOCKS and DIES** and Water, Gas and Steam Fitters' Tools.

Send for Catalogue 27.

Factory: BRIDGEPORT, CONN.

New York Office: 139 CENTRE STREET.

## RICE LEWIS & SON, LIMITED, Hardware and Metal

**MACHINIST TOOLS, PIPE FITTINGS,**

**COMPLETE STOCK OF STOCKS AND DIES.**

**PIPE VICES.**

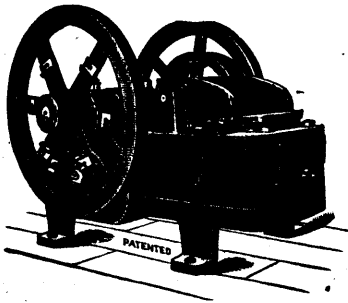
**STILLSON AND TRIMO WRENCHES.**

**STEAM PIPE.**

**CORNER KING AND VICTORIA STREETS, - - - TORONTO.**

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

## ROLL JAW CRUSHER.



# Crushes

Large Rock

to

# 4 inch.

Send for Circular.

**STURTEVANT MILL CO.,**

104 Clayton St.  
Boston, - Mass.

started fitting it up for manufacturing purposes.—Hamilton Spectator.

The Smith-Patterson Co., Montreal, has been incorporated with a capital of \$60,000 to manufacture jewellery, etc. The provisional directors include F. A. Mansfield, Montreal; T. H. Brady, Toronto, and H. W. Patterson, Boston, Mass.

A joint stock company is being organized at St. John, N.B., to operate the William Parks & Co's cotton mills, which were recently acquired at sheriff's sale by Messrs. J.F. Robertson and A.H. Hannington, of St. John. The capital of the new company will be \$250,000. The mills, of which there are two, will be worked to their full capacity. The Park mills are one of the old-established industries of St. John, and when running to their full extent gave employment to between 500 and 600 hands.

Messrs. Hilners' Sons, Philadelphia, Pa., have been awarded the contract for the wrecking of the Pan-American Exposition. They propose to remove all of the buildings and restore the grounds to their original condition and to pay the Exposition company \$33,364.50, the wreckers to have all of the building material. The specifications provide that all of the machinery is to be removed and stored for the company by the wreckers and that the grounds are to be put back in their original condition by July 1, 1902.

The J. H. Ashdown Hardware Co., Winnipeg, Man., has been incorporated with a capital of \$1,000,000 to manufacture hardware, etc. The provisional directors include J. H. Ashdown, A. Buehler and J. A. Lindsay, all of Winnipeg.

The Caverhill-Kissock Co., Montreal,

has been incorporated with a capital of \$225,000 to manufacture wearing apparel for women and children. The provisional directors include J. B. Caverhill, Wm. Kissock and A. S. Robertson, all of Montreal.

J. C. Wilson & Co., Glenora, Ont., have recently shipped a 33-inch vertical Little Giant water wheel to the Oxford Foundry & Machine Co., Oxford, N.S., and one of the same size to McBroom Bros., Washburn, Ont., for driving their flour mill.

The Truro Knitting Mills Co., Truro, N.S., has been incorporated with a capital of \$300,000 to manufacture textile fabrics. The provisional directors include J. Stanfield, F. Stanfield and H. M. Stanfield, all of Truro.

Oil has been discovered in New Brunswick, and it is believed to be the largest unexplored oil field in North America.

The Toronto Street Railway Co. will be taking electric power from Niagara within a year and a-half if the negotiations of that company and the Niagara Power Co. are successful.

An interesting roundhouse is that of the Lake Shore road at Collinwood, Ohio, described in the October number of the American Engineer. This house, having a turn table seventy-two feet in diameter, is one of the largest ever built. It is heated throughout by the Sturtevant system, the hot air being discharged to the locomotive pits and serving as it rises to rapidly melt the snow and ice from the running gear. This method is coming into general use in all new buildings of this character.

The Canadian Bent Chair Co., Listowel, Ont., will start at once to build their new factory. The building will be 58x52, three stories high, with a two-story boiler house, 36x34.

The Hamilton Whip Co., Hamilton, Ont., will build an addition to their factory.

Messrs. Colin McArthur & Co., Montreal, whose wall-paper factory was recently destroyed by fire, entailing a loss of about \$50,000, will rebuild on a larger scale, installing the latest machinery.

The Brompton Pulp & Paper Co., Brompton Falls, Que., will establish pulp and paper mills. E. W. Tobin, Brompton Falls; C. C. Wilson, Auburn, Me.; and W. C. Twitchell, Milan, N.H., are among the provisional directors. The company has secured over 50,000 acres of pulp wood land along the St. Francis River.

A cargo of 4,600 tons of pig iron has been sent to Boston, Mass., from Sydney, N.S. This is the first cargo to be exported to the United States from Sydney.

While boring for water on the Gooderham property on the Dawes road near Toronto, a flow of natural gas was struck, which, when lighted, threw a flame fifteen to twenty feet high.

The Joseph Dixon Crucible Co., will make important additions to the plant at Jersey City, N.J., thereby increasing the capacity of the pencil and crucible departments, which have been under special pressure. Plans have been prepared for four storey and basement buildings, and it is anticipated the new machinery will be installed and the entire equipment in operation shortly after the first of the year.



## The "NEW YANKEE"

# Drill Grinder

SAVES 50 PER CENT. OF TIME IN ADJUSTMENTS

COMPLETELY  
SELF-  
CONTAINED

OUR machines require no wrench, measuring instruments or gauge saws. We have entirely done away with them. Any amount of clearance desired can be obtained instantly. Drills can be ground to do more and better work. Send for Catalogue showing 10 styles, and full explanation of machines grinding from No. 60 to 5 inches.

## JOHN LUMSDEN & CO.,

375 St. James St.  
MONTREAL

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

Capacity  
3-32 to 1 1/2  
inches.

Style "K"

**THE LOOM OF LIFE.**

All day, all night, I can hear the jar  
Of the loom of life, and near and far  
It thrills with its deep and muffled sound,  
As tireless the wheels go always round.

Busily, ceaselessly, goes the loom,  
In the light of day and midnight gloom,  
The wheels are turning early and late,  
And the woof is wound in the warp of fate.

Click, clack! there's a thread of love  
wove in;

Click, clack! another of wrong and sin.  
What a checkered thing this life will be  
When we see it unrolled in eternity!

Time, with a face like mystery,  
And hands as busy as hands can be,  
Sits at the loom with hands outspread,  
To catch in its meshes each silken thread.

When shall this wonderful web be done?  
In a thousand years, perhaps in one;  
Or to-morrow. Who knoweth? Not  
you or I!

But the wheels turn on and the shuttles  
fly.

Ah, sad-eyed weavers! the years are  
slow,  
But each one is nearer the end, I know;  
And some day the last thread shall be  
woven in—  
God grant it be love instead of sin.

Are we spinners of wool in this life-web  
—say,  
Do we furnish the weaver a thread each  
day!

It were better, then, O, my friend, to spin  
A beautiful thread than a thread of sin!

**VENTILATING RAILROAD SHOPS.**

The Engineering Record of October 12, presents a very interesting and complete illustrated description of the ventilation and heating of the Denver Shops of the Colorado Road, from which the following is an abstract:—

The Colorado & Southern Railway erected a short time ago a number of shops in Denver. A fan system of heating was decided on, warming altogether by the air circulated. The plant is interesting in its general proportions, a comparatively small number of outlets sufficient for buildings of somewhat larger volume. Otherwise the installation is typical of hot air systems for mill buildings using fans for positive circulation, the apparatus comprising fans, heater coils and overhead circular air-ducts provided with short branches directing the air toward the breathing line and the portions of the building subject to the greatest cooling action. The fan heater units are of the type in which the heater coil is on the suction side of the fan, and the air drawn through the heater is taken from the interior space of the shop, this resort to what might be considered the use of partially vitiated air being advised on the grounds that the apparatus is much less expensive in steam consumption, receiving the air at a much higher initial temperature than if taken directly from out of doors, and because a large

**JAMES FOLEY & CO.**  
*Dye Stuffs and Chemicals*  
**MILL SUPPLIES**

579 and 581 ATLANTIC AVENUE, BOSTON, MASS.  
Direct Importers of Best Brands Anilines.

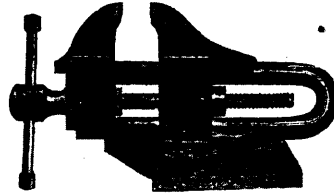
**IF YOU CAN'T COME, WRITE** to our nearest office for information about

E. HOWARD & CO., Watchman's Clocks

**THEY WILL SAVE YOU 10 ON YOUR INSURANCE**

Established 1842 **The E. HOWARD CLOCK CO.** 395 to 403 Washington St., BOSTON  
41 and 43 Maiden Lane, NEW YORK

**WARE'S PATENT Steel Yoke Vises.**



The weakness of all vises, made entirely of cast iron, is their tendency to break at the point where the strain is greatest, viz.: the junction of the front jaw with the slide or yoke.

This difficulty is completely overcome in WARE'S VISE, in which the yoke or slide is made of one piece of cold rolled wrought steel shafting cast into the front jaw.

This method of construction produces a vise that is practically unbreakable, of great strength and solidity; easy running, by virtue of the highly polished surface of the steel yoke; efficient and convenient in every particular.

The slide being narrow affords plenty of space on either side for the handling of long work perpendicularly, which cannot be done with other vises. Prices and all particulars on application. **SOLE MAKERS:—**

**The JAMES SMART MFG. CO., Limited**  
BROOKVILLE, ONTARIO, CANADA.

**MICA BOILER COVERING CO. LIMITED**  
**Contractors to the Admiralty**

The demand for **MICA COVERING** is largely increasing. It has been proved and tested in all kinds of service, and leads the market absolutely on its merits. Awarded the **Gold Medal** at the Pan-American; Prize Winner at the Paris Exposition, etc. Its use in Great Britain and the United States extending. Some recent Canadian repeat orders. Write for full particulars from

**THE MICA BOILER COVERING CO. Limited, 86-92 Ann St., Montreal**

**MARSH STEAM PUMPS**  
MANUFACTURED BY **AMERICAN STEAM PUMP CO.**  
BATTLE CREEK MICH.

SMALLER FEEDER, HYDRAULIC PRESSURE PUMP, LARGE FEEDER, AIR COMPRESSOR, FOR DEEP WELLS, COMPOUND, LARGEST TANK

35000 SOLD IN ELEVEN YEARS  
MAXIMUM STRENGTH, SIMPLICITY AND SERVICE

WRITE FOR NO. 1 CATALOGUE

Canadian Agents **The A. R. WILLIAMS MACHINERY CO. LIMITED**  
Head Office, TORONTO  
Branch Office—MONTREAL



**THE STOWE-FULLER CO.**  
**FIRE BRICK MANUFACTURERS**  
**ALL FURNACE MATERIAL**  
 Superior Building CLEVELAND, O.      SEND FOR CATALOGUE

**CLARK & DEMILL**  
 MANUFACTURERS OF  
**Wood Working Machinery**

Our Foundry is equipped with the best material, and our Machine Shop with the Latest Improved Tools.

OFFICE AND WORKS:  
 Directly South of C.P.R. Station,  
**GALT, ONT.**

**The Wm. Hamilton Mfg. Co.**  
 Peterboro, Ont., Can.  
 Acting as the Patentee's Licensee  
 Are prepared to manufacture and supply

**SAVERY'S PATENT SHAKE FRAMES**  
 FOR  
*Fourdrinier Paper Machines,*  
 AS DESCRIBED IN  
 Canadian Patent No. 57,619.  
 —ALSO—

**SAVERY'S PATENT COMBINED DRYER STEAM JOINT AND SAFETY VALVE**  
 AS DESCRIBED IN  
 CANADIAN PATENT No. 68,093.  
 ABOUT 2,000 NOW IN USE.

**BALE'S Fire Cement**  
 FOR  
 LINING AND REPAIRING  
 STOVES, FURNACES, RETORTS  
 And all work where great heat is required.

**BALE & CO.,** Newgate St., LONDON, ENG.  
 GAS PURIFICATION and GENERAL IRON MERCHANTS



**TRIMO**  
 This PIPE WRENCH is drop forged and built for hard usage. Does not crush, slip, or lock. All parts interchangeable. Send for catalog showing complete line.  
**TRIMONT MFG. CO.,** Roxbury, Mass., U.S.A.

proportion of the heated air on issuing from the distributing air pipes eventually reaches the outside walls and partitions of the shop, whereby it makes its escape into the outside atmosphere through the numerous openings and unseen points of egress which a building of this type of construction possesses. The air thus escaping is, of course, replaced by cold and fresh air that makes its way in largely through open doors. The apparatus was installed by the B. F. Sturtevant Co.

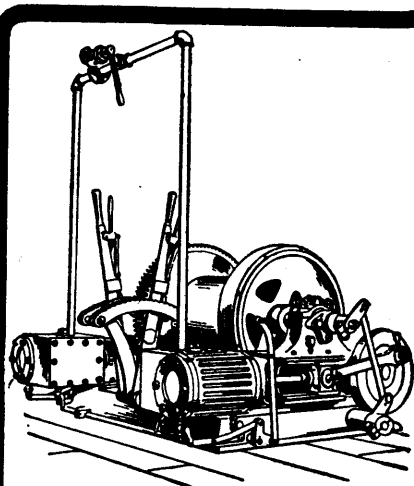
The buildings heated by the system briefly outlined comprise a machine shop and an erecting shop, these two buildings continuous with each other along one side, and a car shop and a wood-working machine room, the latter two adjoining each other at one end.

**ST. LAWRENCE TO THE HUDSON.**—The only sensible solution for the continental basin in which lie all the Great Lakes, not only for Canada, but ourselves, and to insure the commercial supremacy of New York, is a deep waterway from the St. Lawrence to the Hudson, writes John A. Wright in the New York Sun. By our effort we have now detailed surveys of such a waterway, which involves a route from the St. Lawrence (Lake St. Francis) to Lake Champlain, forty-six miles of canal and two locks, and from Lake Champlain to the upper Hudson, thirty-five miles of canal, mainly in twenty-eight miles of the divide cut. This is all down hill and has ample water supply, and about half-a-dozen locks altogether.

A waterway down the St. Louis or Chateaugay river valley, about ten miles, would make a waterway from Lake St. Louis and the mouth of the Ottawa, of direct connection with the proposed Georgian Bay-Ottawa ship canal, partially surveyed by an incorporated company which is now financing it and which has been recommended for action by the Dominion Government for Minister Tarte of railways and canals. Such waterways, two sections of which are less than other ship canals existing in the world to-day, and the under-water excavation from Troy to Coxsackie, to which point thirty feet extends in Hudson profile, is no more than has been done by our neighbors in Canada below Montreal to bring thirty feet to that point.

Such a route not only avoids the dangers of the lower St. Lawrence, but affords a way from Montreal to New York of about 350 miles, against 986 miles by the Straits of Belle Isle. It will be safe navigation, and being in a lower latitude will be a longer open season, of which we have charts for years, and it is the most direct route for South America, West India and Atlantic coast trades from Canada and the basin of the Great Lakes.

An appreciation of the trade possibilities and value of such commercial channels by us on this side of the border equal to that of our Canadian cousins, would insure the construction of such waterway and make New York the port of all America and of this great business within a decade.



**BACON'S 1901**

**Hoisting Engines**

These engines are designed with special reference to efficiency, durability and convenience in operation.

Besides various standard sizes and styles, modified types are built, specially adapted for underground use, contractors, bridge builders, ships and docks, operating cableways, etc., etc.

Whether your requirements are small or large, we shall be glad to receive your inquiries, and to submit attractive figures for your consideration.

**JENCKES**  
**The MACHINE COMPANY.**  
 SHERBROOKE, QUE.

Branch Offices in  
 Principal Canadian Cities.

# COAL JAS. H. MILNES & CO. COKE

WHOLESALE DEALERS IN  
**Best Grades of STEAM COALS.**  
**Best Grades of BLACKSMITHS' COALS.**  
**Best Grades of FOUNDRY COKES.**  
 Shipments made direct from Mines to any point in  
 Canada. Write for quotations.

Head Office: 78 QUEEN ST. EAST TORONTO. Docks: Esplanade, Foot of Yonge

**LINSEED OIL.**—There are three methods employed in producing "boiled" oil. The first consists in boiling the oil at a temperature varying from 450 to 500 degrees Fahr. with red lead and litharge in the proper proportions.

The second method consists in simply mixing raw linseed oil at a moderate temperature with more or less proportion of a concentrated solution of lead and manganese-linoleate.

The third process consists in incorporating the oxidizing agent or the metallic oxides in the oil, under the action of steam heat.

The first method produces the kettle-boiled oil.

The second method produces what is known as "bung-hole" oil.

The third method produces what is known in the trade as "steam-boiled" linseed oil.

When the oil is extracted from the seed, whether by pressure or the volatile solvent process, it is not only the pure linolein that is squeezed out or is separated from the seed, but also the substance that is called the mucilage and various other substances, and these all exist in freshly-made linseed oil.

In the kettle-boiled oil where the temperature, as mentioned in first paragraph, is from 450 to 500 degrees Fahr. the mucilaginous and other undesirable matter rises to the top of the oil and is skimmed off.

In the "bung-hole" process all of the mucilaginous matter and the undesirable

substances are retained in the oil to the detriment of its quality as a paint oil.

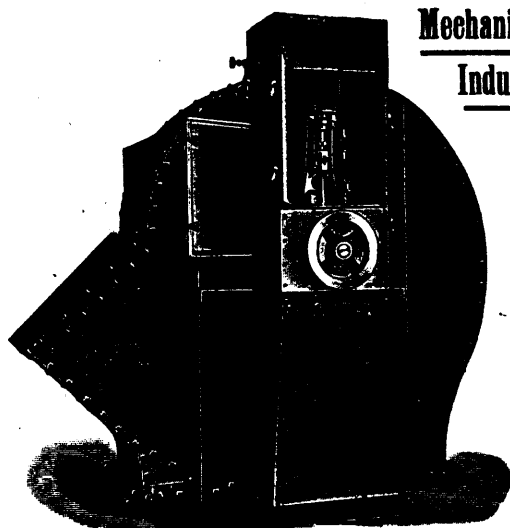
The third process mentioned, which produces steam-boiled oil, is a quicker and more economical way of turning out an oil purified by heat, but as the heat is seldom or never over 300 to 325, very much of the undesirable impurities are left in the oil, and the steam-boiled oil is therefore inferior to the kettle-boiled oil, and is sold at a less price than the genuine kettle-boiled oil.

**A GOOD BELT DRESSING.**—A cheap and effective dressing for a belt is tallow. When a belt is pliable, and only dry and husky, the application of blood-warm tallow, thoroughly dried in by the heat of the sun or fire, will tend to keep the belt in good working condition. The oil of the tallow passes into the leather, serving to soften it, and the stearin is left on the outside, to fill the pores and leave a smooth surface. The addition of resin to the tallow for belts, if used in wet or damp places, will be of service and help preserve their strength. Belts which have become dry and hard should have an application of neatsfoot or liver oil mixed with a small quantity of resin. This prevents the oil from injuring the belt and helps to preserve it. There should not be so much resin as to leave the belt sticky. Belts should not be soaked in water before oiling and penetrating oils should but seldom be used, except occasionally when a belt becomes very dry and hard. It may then be

moistened a little and have neatsfoot oil applied. For new belts a composition of tallow and oil, with a little resin or beeswax, should be used. Prepared castor oil dressing is good and may be applied with a brush or rag while the belt is running. Belt dressings of any kind must not be applied too liberally in the case of a new belt, otherwise it is apt to stretch, making it very liable to run out of line.

**ONTARIO MINING RECORD.**—The greatly increased development of Ontario metalliferous mines is shown by the returns of production for the past nine months of the year, as reported to the Bureau of Mines. These show an aggregate of \$2,822,003, compared with \$2,541,131 for the whole of 1900, or a proportionate increase of about 48 per cent. This is the highest production yet reached by the mines of this province. The increase has every sign of permanency, as it is made up largely of iron and nickel, of which there is an abundant supply for the future. The following table shows the production and value of the respective minerals:—

	Quantity.	Value.
Iron ore, tons.....	216,614	\$224,546
Pig-iron, tons.....	87,888	1,296,344
Nickel, pounds....	6,518,191	737,214
Copper, pounds....	5,950,428	286,376
Arsenic, pounds....	975,054	30,432
Gold, ounces.....	11,008	186,294
Silver, ounces.....	98,200	58,797
Zinc ore, tons.....	400	2,000
		<b>\$2,822,003</b>



Bottom Angular Up Discharge Right Hand Fan.

## Mechanical Induced DRAFT FANS

Installed in connection with a Boiler Plant, will prevent smoke, will give greater fuel economy and increased boiler capacity, besides which the initial cost is far less than that of a chimney.

Mechanical Draft may be applied to old boilers to increase draft at a minimum initial outlay.

FOR PRICES and PLANS WRITE

**McEACHREN HEATING and VENTILATING CO.**  
**GALT, ONT., CANADA**

IN THEIR NEW FACTORY . .

32, 34, 36, 38 and 40  
 DUNDAS STREET

THE . . .

## Electrical Construction Co.

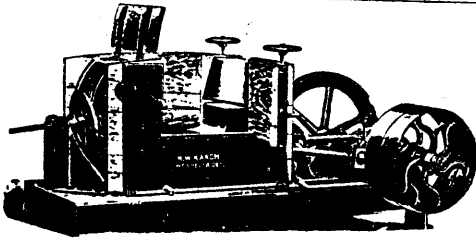
OF LONDON, Limited

Beg to call the attention of their patrons to their removal to a more commodious and up-to-date factory, where, with improved facilities, they can guarantee even better attention and satisfaction than ever before.

Don't buy before getting their prices, when purchasing Dynamos, Motors, Fixtures or Supplies

Quotations Supplied  
 on Application.

PHONE 1103



# H. W. KARCH

HESPELER, ONT.

**IRON FOUNDER and MACHINIST**

Manufacturer of

**WOOLEN MACHINERY,**

Rotary Fulling Mills, Kicker Fulling Mills, Soaping Machines,  
Cloth Washers, Wool and Waste Dusters, Rag Dusters, Drum Spool Winders  
Reels, Spooling and Doubling Machines, Ring Twisters, Card Creels  
Dead Spindle Spooler for Warp or Dresser Spools,  
Patent Double-Acting Gig Dyeing Machines.

The heaviest increases are in iron ore, which rose from \$111,805 in 1900 to \$224,546 for the first nine months of 1901; pig-iron from \$936,066 to \$1,296,344 for the same period; nickel from \$756,626 in 1900 to \$737,214 for the first nine months of 1901, and arsenic, which rose from \$22,725 to \$30,432. There were 156,731 tons of iron ore smelted into pig-iron, of which 93,165 tons, or 59 per cent., was from Ontario mines, the remainder being imported ore.

Of nickel-copper ore 222,133 tons were raised and 153,194 tons smelted, the matte product being 20,723 tons. The Canadian Copper Co. remains the chief producer, but the Mond Nickel Co. is now turning out converter or high-grade matte. There were 10,100 tons of non-nickeliferous copper ore raised during the nine months.

**A GOOD SHOWING.**—On a recent occasion at Vittoria, Ont., Hon. E. J. Davis, Commissioner of Crown Lands, speaking of the expansion of the mining industry in Ontario, said that the figures available for the nine months of the present year show an increase of 17 per cent. in the production of nickel matte and 24 per cent. in the production of refined copper. The increase in iron was most remarkable. There were 111,805 tons of iron ore raised in Ontario in 1900, worth \$107,583. The production during the first nine months of this year was 209,310 tons, valued at \$210,810, an increase, compared with the whole of last year, of 90 per cent. in quantity and 95 per cent. in value. In eastern Ontario also there was much improvement. In Hastings there were two gold mines in operation on a scale not generally known. The Deloro gold mine is running twenty stamps on arsenical ore, and employing 160 men, and the Cordova Company is operating thirty stamps on free milling ore. Both of these are English companies, who have no stock for sale, and who consequently are not seeking notoriety. At Deloro a new industry is growing up in the manufacture of arsenic. Corundum has also been found in inexhaustible quantity in Hastings and Renfrew. During 1900, 62,386 tons of pig iron were produced in Ontario, valued at \$936,066. During the first nine months of this year 87,887 tons were produced, valued at \$1,280,827, a comparative increase of 36 per cent. in quantity and 40 per cent. in value. Mr. Davis concluded with a reference to the colonization of new Ontario. It was too early to give complete returns, but in one district alone, the fertile Temiskaming country, over a hundred thousand acres of land had been sold to settlers this year. An unusual number of inquiries had been received recently at the department from the Mother Country. Lately a number of young Englishmen had called at the Parliament Buildings asking for advice as to where to locate. Whether this is due to the visit of Premier Ross to the old country or not is a question, but the fact remains that the number of these young men arriving here has increased very largely during the past month.

## DIXON'S TWO THINGS

DOES

TWO THINGS

AND DOES THEM THOROUGHLY

STOPS THE BELT FROM SLIPPING.

PLEASES THE MAN WHO USES IT.

SOLID  
**Belt Dressing.**

NOTHING EQUALS IT...

SAMPLE SENT FREE. SEND FOR ONE.

JOSEPH DIXON CRUCIBLE CO., JERSEY CITY, N.J. U.S.A.

# "Zanzibar

Anti-Rust

# .. Paint ..

MADE TO ENDURE

**GARFIELD PAINT CO.**

TORONTO, ONT., CANADA

For Roofs of all kinds, Bridges, Iron Work.

IN ALL COLORS

Write for Booklet

"A STUDY IN BLACK."

**W. A. FLEMING & CO., - Montreal, Que.**

Agents for Quebec and Maritime Provinces

## Toronto Elevator Co.

**MILLWRIGHTS AND ELEVATOR SPECIALISTS**

Estimates Given and Losses Adjusted

OUT-OF-TOWN WORK PROMPTLY ATTENDED TO.

AGENTS FOR....

Miller Bros. & Toms, Elevators  
Leitch & Turnbull Co. Limited, Elevators.  
Greening's Wire Ropes.

PHONE 1535 **JOHN H. SHALES,** Manager

74 ADELAIDE ST. WEST TORONTO

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

**A FACTORY NUISANCE JUDGMENT.**—In the Ontario Court of Appeal a few days ago the following proceedings and judgment were had in which all manufacturers are more or less interested:—

**Whipple v. Ontario Box Co.**—Judgment on appeal by plaintiffs from judgment of Ferguson, J., dismissing action to restrain defendants from allowing smoke and sawdust to escape from their factory, No. 120 Main street, in the City of Hamilton, and fall upon the plaintiff's dwelling house opposite the factory, and known as No. 119 Main street. The defendants allege that for more than twenty years they have enjoyed as of right, and without interruption, an easement or right to have the smoke and sawdust from their lands and premises escape and fall upon the plaintiff's property. The trial judge held that owing to defendants' having to fill a contract for boxes for British troops in China, that the factory was working to its full capacity, and the separator got clogged, but that this lasted only a few days, when the nuisance was abated; that as to the smoke the particles alleged to have been carried and deposited by it had not been shown to have come from defendants' factory, which is thoroughly modern in all its appliances, though it appeared that no smoke consumer has yet been devised which will apply to the consumption of fuel such as shavings and sawdust. Held, that in view of the conflicting evidence between the parties with respect to whether the smoke complained of came from defendant's chimney, coupled with letter of October 22, 1900, from plaintiffs' solicitors to defendants' solicitors complaining of sawdust only, and also Plaintiff Whipple's statement to the inspector, this court is not disposed to disagree with the judge below in concluding that the plaintiff had failed to establish that the smoke came from the defendants' chimney. But on the question of sawdust, an entirely different conclusion must be formed. The great preponderance of evidence shows that quantities of sawdust have been blown from defendants' to plaintiffs' premises, which materially interfered with their comfort and enjoyment of their property, and constituted a substantial nuisance, to the abatement of which they were entitled when action brought, but having ceased before trial, an injunction need not be granted. If recommenced, however, a fresh action may be brought. Judgment below reversed, and judgment directed to be entered for plaintiff for \$50 damages and full costs throughout. Per Armour, C. J., the plaintiffs are entitled to an injunction as to the smoke and soot also, but should the nuisance be continued a fresh action may be brought.

**THE ONTARIO CLAY BELT.**—The proposal of the Canadian Pacific Railway to build a branch from Dinorwic station to Lake Minnetakie in the Rainy River district directs attention to another and much more extensive project which the same company have in view in New Ontario. This is the construction of a line northward in Thunder Bay district to tap the great clay belt of 16,000,000

**PRESSED ZINC ORNAMENTS.**

We have perfect facilities for turning out fanciful embellishments, such as Leaves, Modillions, Brackets, Capitals, Festoons, Garlands, Friezes, Wreaths, Enrichments, Rosettes, etc., in very finest quality and style. The work is all clearly brought out in detail, with very bold relief.

Our new catalogue shows an immense variety of handsome designs. Write us if you're interested.

**THE METALLIC ROOFING CO. OF CANADA, LIMITED**  
TORONTO, CANADA.

**N.Y. & Boston Limited  
Kniekerbocker Special  
South-Western Limited**

Famous Trains between

BOSTON	CINCINNATI
NEW YORK	CHICAGO
WASHINGTON	ST. LOUIS

Via

**Big Four Route**

AND

**NEW YORK CENTRAL  
BOSTON & ALBANY**

**Cafe, Library, Dining and Sleeping Cars**

M. E. INGALLS, President.  
W. J. LYNCH, Gen. Pass. and Ticket Agent.  
W. P. DEPPE, Asst. Gen. Pass. and Tkt. Agt.  
CINCINNATI.

THE PACKING OF THE CENTURY  
**HAUGHTON'S PATENT METALLIC PACKING CO.**  
6 LOMBARD COURT LONDON E.C.

Composed of ribbons of anti-friction metals, combined with metallic and other lubricants, therefore in this form will fit any size gland.  
**USED IN THE BRITISH and FOREIGN NAVIES.**  
Always elastic. Lasts for years without re-packing. Packed in cases of 10 and 20 lb., and drums of 1, 2 and 5 cwt.  
**SPECIFY-HAUGHTON'S PATENT PACKING.**

acres which runs east and west for hundreds of miles in northern Ontario. The company carried on very extensive exploration work east of Lake Nepigon last winter, covering approximately 400 miles in length. Roughly, the line taken was semicircular in form, commencing at Nepigon station, running north about 150 miles, then southeasterly to Long Lake, and then south to Jack Fish station, on Lake Superior. The effect of the exploration was to find that the route covered required too expensive construction work, so that another survey will have to be made. While a considerable burned area was found, a timbered area of 800 squares miles, or 512,000 acres, with an estimated total of 11,264,000 cords of timber, was discovered. That portion of the surveyed route between Nepigon and Summit Lake touched Orient Bay and Ombabika Bay. The report of the C.P.R. engineers, which is on file in the Crown Lands Department, shows that in the region between Summit Lake and Long Lake only one-third of the country is covered with timber of any value, and there is very little agricultural land worth anything. South from Long Lake there are steep hills, descending almost to Jack Fish station.

In the region to which the proposed branch north from Dinorwic will give access, which is practically the whole of that explored by Government party No. 10 a year ago, there are, according to their report, 600 square miles of agricultural land, 3,000 square miles of pulp-

wood land, yielding 6,000,000 cords of spruce and 12,000,000 cords of poplar. Besides this, communication, though more remote, would be had with the new Sturgeon Lake goldfields to the east of Lake Minnetakie.

**SPRUCE WOOD IN NEWFOUNDLAND.**—Speaking of the natural resources of Newfoundland, the St. John's Herald has this to say in particular about pulp wood and the prospects for its development:—

With regard to pulp wood, it is known to exist in immense areas in our interior, and to be susceptible of profitable utilization if managed in a business-like and prudent manner. There has been a wonderful increase in the growth of the pulp-making industry of late years, and it seems capable of boundless development yet. Ours is the only colony in North America where it has not been vigorously initiated, and it seems as if our turn would come ere long, if all we see and hear is true.

The spruce, which is mainly employed for pulp wood purposes, was a somewhat despised member of the forest family until its use for the manufacture of paper was discovered. Common as it is in these northern regions, it is by no means too plentiful either in other parts of this continent or in Europe. In Canada it is abundant, and with us it is the same, and this abundance should give us a leading position in the industry. It is admitted in the United States that the visible

supplies of standing forest suitable for pulp wood are rapidly being consumed, and already American paper makers and others are casting about for new areas to which to transplant their mills and machinery, which must soon become idle unless some other substitute is discovered, and of that there is so far very little prospect.

We want the initiation of large mills and the manufacture of pulp and paper. We want an addition to our revenue by the levying of a tax per cord for all the pulp wood taken off our spruce areas, and we want the increased employment for our people which the starting of these industries will afford. There is talk of Mr. Reid, or his company, initiating a pulp mill at Grand Lake to cost \$2,000,000, and plans for the structure have already been drawn and exhibited to many persons. That project will now, we presume, be carried into effect, and if it is there will be one forward step made, the advantages of which it will not be difficult to realize. It will assuredly mean that other like concerns will follow but with little delay.

There is room in our interior for a score of such enterprises, and there is employment in these enterprises for our whole adult population not otherwise occupied. Each mill site will see its own little village arise, clustering about the great industrial centre, and the world will awake to see modern machinery turning into wealth the erstwhile despised forest products of this neglected colony.

## A Michigan Man

WRITES AS FOLLOWS:

"If we had one hundred more steam pipes we certainly should not be satisfied until we had them all equipped with



## BURT EXHAUST HEADS

They save steam and increase the efficiency of your plant, and make escaping wet steam and oil a thing of the past.

The Catalogue mailed on request.

**THE BURT MFG. CO.,**

AKRON, OHIO, U.S.A.

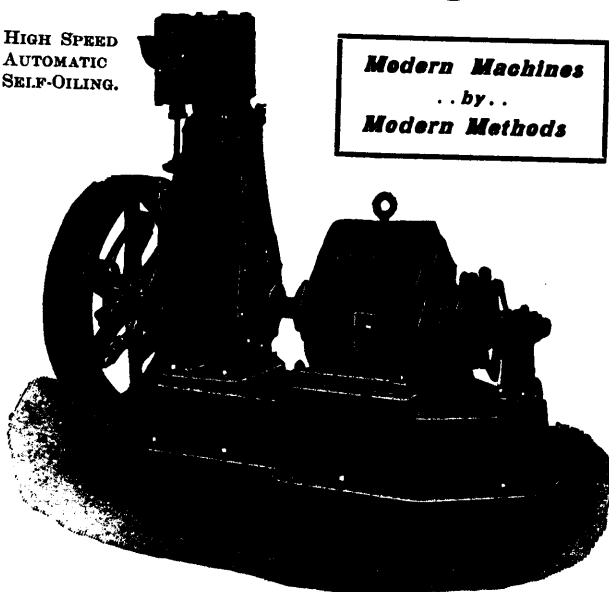
LARGEST MFRS. OF OIL FILTERS IN THE WORLD

## Buffalo Forge Company

### ENGINES

HIGH SPEED  
AUTOMATIC  
SELF-OILING.

*Modern Machines*  
.. by ..  
*Modern Methods*



Buffalo Single Vertical Direct Connected Engine.

**BUFFALO FORGE CO., BUFFALO, N.Y.**

E. A. WALLBERG, - CANADIAN REPRESENTATIVE

410 Temple Bldg, TORONTO. Merchants Bank Bldg., MONTREAL.

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

It is to be hoped that this logical outcome of the schemes of expansion now filling the air will not have to be long waited for, but that ere a year has passed the foundations of these new industries will be laid and the practical exploitation of our interior set on foot. It cannot come too soon, but it will be warmly welcomed by our people when it does.

**ONTARIO MINING INDUSTRY.**—What promises to be the largest gold mine in Ontario, if not in the Dominion, is the Belmont, in Hastings County, in the opinion of Mr. T. W. Gibson, Director of the Bureau of Mines, who visited eastern Ontario a few days ago. There is now a thirty-stamp mill in operation, while the owners, the Cordova Mining & Exploration Co., contemplate increasing it to 100 stamps. There are ten well-defined veins on the property, some of them thirty feet wide, and an abundance of ore in sight. About seventy-five tons of ore are treated daily and 235 men are employed. It is not a high grade ore, but is said to run about six dollars a ton. The company are developing a water power at Deer Lake, where they hope to obtain 800 h.p.

Mr. Gibson also visited the Deloro gold mine, operated by the Canadian Gold Fields Co., which produces both gold and arsenic, and which is said to be the only place at which arsenic is produced on this continent. They are producing about eighty tons of refined arsenic per month, selling at about four cents per pound. The gold taken out is also a paying product, although much difficulty is experienced in reducing the refractory ores. There is a twenty-stamp mill in operation, and 160 men are employed.

While at Madoc, Mr. Gibson, attended a meeting of mining men, at which resolutions were unanimously passed appointing delegations to wait on the Dominion and Provincial Governments to ask for a bounty on refined arsenic. So far, it is understood, the question has not been considered by either Government. It is claimed that all the arsenic required in America could be produced in Hastings, Germany and England being at present the chief sources of supply.

The Canada Corundum Co. have succeeded in overcoming the difficulties of treatment at their works in Renfrew County and are employing forty men. The supply of raw material is said to be inexhaustible and is the largest known deposit of corundum in the world.

**CANNOT USE THE NAME.**—In the suit of the Babcock & Wilcox Co. against the Joshua Hendy Machine Works a decree has been entered in the United States circuit court for the northern district of California, as follows:—

“That a perpetual injunction be and is hereby issued against the respondent, the Joshua Hendy Machine Works, and its officers, agents, attorneys, servants, clerks and employes, enjoining it and them and each of them from using the name ‘Babcock & Wilcox,’ either alone or combined with other word or words upon or in connection with the sale or offering for sale

**THE BOURNE-FULLER CO.**

**IRON, STEEL**

AND

**PIG IRON**

**CLEVELAND, OHIO, U.S.A.**

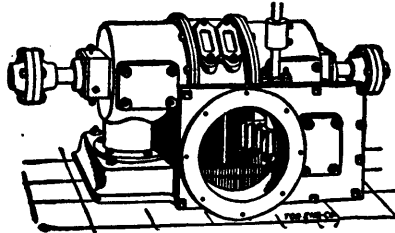
**IF YOU VALUE TIME and WANT COPIES OF WHAT YOU WRITE**

Drop a line to us and we will send you samples of our **IMPROVED AUTOMATIC DUPLICATING BOOK** that makes copies without the trouble of inserting a Carbon Leaf.

**The MORTON CO., Limited,**  
46 RICHMOND ST. W.

Phone Main 2554

TORONTO



Horizontal Type.

Water Wheel Governors, Machine Dressed Gearing, Pulleys, Shafting and Bearings.  
Catalogue and Gear List mailed on application. Correspondence Solicited.

**J. C. WILSON & CO., - - GLENORA, ONT.**

**“LITTLE GIANT” TURBINE**

...FOR ALL PURPOSES...

HORIZONTAL AND VERTICAL  
BUILT IN 44 SIZES.

We guarantee a higher percentage of power from water used than any other wheel on the market.

**BELL PIANOS and ORGANS**

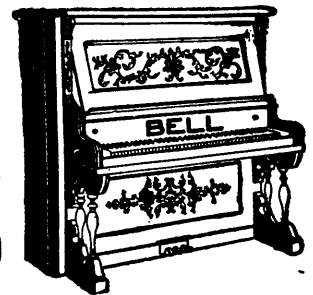
BUILT TO LAST A LIFETIME  
AND USED THE WORLD OVER

Send for Catalogue No. 47 to

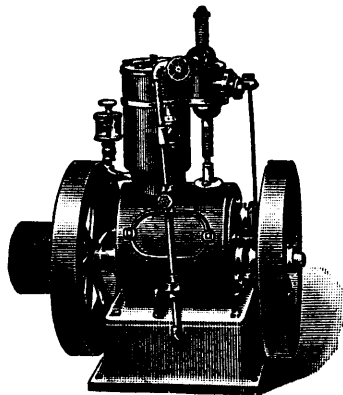
**THE BELL ORGAN AND PIANO CO., LIMITED**

QUELPH. - - ONTARIO.

LARGEST MAKERS IN CANADA.



**THE SYLVESTER GAS and GASOLINE ENGINES**



Are beyond doubt the most complete and economical engine in the market. They are compact and perfectly under control, easily managed, get up speed immediately, thoroughly reliable, and where intermittent power is required they are just the thing.

They are built in sizes from 1 to 20 h.p., upright and horizontal, for pleasure yachts, boats, shops, farm work and any purpose where light power is required. Tell us to what use you want to put the engine, and what power you require, and we will name you prices.

SEND FOR CATALOGUE.

**SYLVESTER BROS. MFG. CO., Lindsay, Ont.**

ALEX. GARTSHORE, President. J. G. ALLAN, Sec.-Treas. JAS. THOMSON, Vice-Pres. and Gen. Mngt.

**THE GARTSHORE-THOMSON PIPE & FOUNDRY CO. Limited**

**CAST IRON PIPE**

3 in. to 60 in. diameter.

**For Water, Gas, Culverts and Sewers**

Special Castings and all kinds of

FLEXIBLE AND FLANGE PIPE.

**WATER WORKS SUPPLIES**

**HAMILTON, ONT.**

CUPOLAS

## FOUNDRY EQUIPMENT

CRANES

E. A. WALLBERG, C.E.

Temple Building, TORONTO

Merchants Bank Building, MONTREAL

of any boiler or other steam apparatus not manufactured by the complainant, and from stating or representing that any boiler or other steam apparatus sold or dealt in by the respondent and not manufactured by the complainant is a Babcock & Wilcox boiler, and from selling or offering for sale, or passing off any such boiler or other steam apparatus, as and for boilers or steam apparatus manufactured and sold by complainant."

This decree is of interest to every manufacturer, as it tends to sustain a property right in a trade name which has become valuable by reason of its long use in a successful business. It seems to be a matter of simple justice that a concern should be protected from infringement by others in the use of a trade name which the public has learned to regard as the designation of the source from which a manufactured article comes rather than as a description of the article.

A SMOKE CONSUMER.—"About a year ago," said a Chicago patent lawyer, "I secured a patent on a smoke consumer for a client of mine. He came into the office the other day and I asked him what he was doing with his invention.

## FOR SALE.

One 25-light Reliance Arc Dynamo, in first-class condition.  
One 60-light Royal type Transformer, 1040 Volts to 110.  
Newly Re-wound.  
Three 10-light Shellenberger Watt Meters.

Two 20-light Duncan Watt Meters.

THE ABOVE WILL BE SOLD CHEAP

Address CORPORATION OF MITCHELL, Box 207. ONT.

## FOR SALE

CANADIAN PATENT No. 70,666

(Patented March 26, 1901)

Miller's Detachable Horse Shoe Calk.

Durable and cheap.

For full particulars address J. WALLACE MILLER Bernharts P.O., Berks Co., Penn.

"Well," he said, "I haven't had much success with it. It's hard work to get a thing like that introduced. Last spring after a lot of arguing I got a West Side laundry firm to try it, with the understanding that I was to take it out at my own expense if it didn't give satisfaction. After it had been in use a month or so I thought I'd go over and see how it was working.

"As I approached the laundry I saw that there wasn't a bit of smoke rolling out of the stack. In fact, it was almost impossible to see from the outside that there was a fire in the boiler. It made me feel mighty good to see that the thing was working so well, and I went into the office full of confidence.

"Well," I said to the senior partner, "how do you like your smoke consumer?" "I've been going to write to you about that," he replied. "We want it taken out."

"What's the trouble," I asked him.

"You agreed to take it out at your own expense if it wasn't satisfactory, you know. We have the contract in writing."

"That's all right. I'm not denying that I agreed to take it out; but I'd like to know what's the matter with it. I looked at it just now and it seemed to be consuming the smoke all right."

"Oh, it consumes as far as that's concerned, but since the smoke has quit rolling out of the stack a lot of our old customers seem to think we've shut down here and they're taking their laundry somewhere else."

"Yes," the junior partner added, "and I can't imagine where we ever got the fool idea that we ought to help stop the smoke anyway. It would be just as sensible for a saloonkeeper to go around preaching temperance."

"So I had to take the consumer out, and I've decided to give up trying to introduce it among the laundries."

SOURCES OF GUTTA-PERCHA. — Two years ago Mr. Lazari Weiller, of France, sounded an alarm with regard to the future supply of gutta-percha. This gum has been utilized for insulating purposes for over sixty years, and is considered a necessity for submarine cables. To obtain the gum the tree is cut down, while

trees and vines yielding India rubber need only be tapped and the plant yields again after recuperation. This is not the case with the gutta-percha tree. About 6,000,000 trees have been killed for gutta-percha since the gum became an article of export in 1845. Of late years many trees have been cut before reaching maturity. Mr. Weller said the supply of the quality of gutta-percha needed for submarine cables would not last fifteen years longer unless means were taken to protect the forests or propagate the plants elsewhere.

The Malay archipelago, Borneo and Sumatra, have always been the largest sources of supply. Within the past two years naturalists have been sent out from France, England and Holland to make studies of the conditions under which the plant grows best and report upon the best means of increasing the production. Under the direction of these experts France is now engaged in planting the variety known as Isonandra gutta, which is regarded as the best quality of the gum.



SEALED TENDERS addressed to the undersigned, and endorsed "Tenders for Alberni-Clayoquot Telegraph," will be received at this office until Tuesday, Dec. 3rd, inclusively, for the supply of Telegraph poles for a line from the Telegraph Office at Alberni, in the County of Vancouver, Province of British Columbia, along the route described, to Clayoquot, a total distance of seventy-five miles more or less; also for the construction of the above line of telegraph in accordance with the specification.

Specifications can be seen and forms of tender and all necessary information obtained at the office of Mr. Wm. Henderson, Clerk of Works, Victoria, B.C., and at the Department of Public Works, Ottawa.

Contractors are notified that tenders will not be considered unless made on the printed form supplied, and signed with their actual signatures.

An accepted cheque on a chartered bank, payable to the order of the Minister of Public Works, equal to ten per cent. of the amount of the tender, must accompany each tender. The cheque will be forfeited if the party decline the contract, or fail to complete the work contracted for, and will be returned in case of non-acceptance of tender.

The Department does not bind itself to accept the lowest or any tender.

By Order,

FRED. GELINAS,

Secretary.

Department of Public Works,  
Ottawa, Nov. 5th, 1901.

Newspapers inserting this advertisement without authority from the Department will not be paid for it.

B. GREENING WIRE CO.  
(LIMITED)  
WIRE MANUFACTURERS  
& METAL PERFORATORS  
HAMILTON  
& MONTREAL.

Wire Screens for  
Every Class of  
Material.

Perforated Metal  
of Steel, Cop-  
per, Brass, Zinc  
for all pur-  
poses.

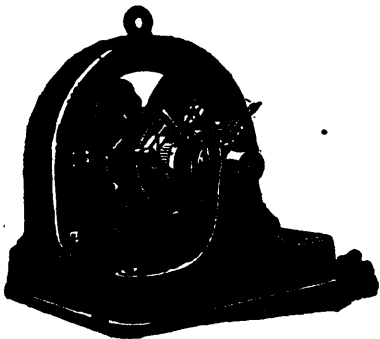
Special Attention  
given to Miners  
Requirements.

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

**PATENTS** PROVISIONAL PATENTS, Caveats, Etc.  
**H. DIXON,**  
 REGISTERED ATTORNEY,  
 MECHANICAL EXPERT, ETC.  
 124 VICTORIA STREET, TORONTO, ONT.

**SILICIA BRICKS**  
 Highest Grade for all Purposes  
**MAGNESIA BRICKS**  
 FOR LINING  
*Smelting, Refining and Matte Furnaces, also Converters Rotary Cement Kilns.*  
**F. HYDE & CO.** 31 WELLINGTON ST. MONTREAL.

**TORONTO and HAMILTON  
 ELECTRIC CO.**



**MOTORS and DYNAMOS**

MODERATE and SLOW SPEED OF HIGH EFFICIENCY.  
 EITHER BELTED OR FOR DIRECT CONNECTION.  
 REPAIRS PROMPTLY EXECUTED ON ALL ELECTRICAL APPARATUS.

**T. & H. ELECTRIC CO.**  
 99-103 McNAB N., HAMILTON, ONT.

CHARLES F. CLARK, President. JARED CHITTENDEN, Treasurer.  
 Established 1849.

**BRADSTREET'S**  
 Capital and Surplus, \$1,500,000

Offices Throughout the Civilized World.  
 EXECUTIVE OFFICES,  
 346 & 348 Broadway, New York City, U.S.A.  
 Correspondence Invited.

OFFICES IN CANADA:  
 Halifax, N.S. Hamilton, Ont.  
 London, Ont. Montreal, Que.  
 Ottawa, Ont. Quebec, Que.  
 St. John, N.B. Toronto, Ont.  
 Vancouver, B.C. Victoria, B.C.  
 Winnipeg, Man.  
 THOMAS C. IRVING, Gen'l Manager Western Canada, TORONTO.  
 JOHN A. FULTON, Con'l Manager Eastern Canada, MONTREAL.

A large number of the trees are being planted in Reunion and Madagascar. It is believed that the conditions under which the plant thrives are fully realized in these islands, and every effort will be made to make the experiment successful.

The Dutch government also is now planting the trees in various parts of the Dutch East Indies. It is asserted, however, by French experts that the Dutch are using inferior qualities of the plant. The British authorities in the East Indies have thus far limited their efforts to regulations making it a misdemeanor to destroy immature trees.

In a pamphlet published in Germany last year the writer asserted that the Philippines are among the few places in the world in which the gutta-percha tree reaches its best development. If these trees may be successfully cultivated in the Philippines a new source of wealth open to American enterprise will be available.

The prospect is that within the next half century more ocean cable will be laid than is now in service if the supply of gutta-percha is adequate for the protection of all the submarine wires needed. Up to the present time nothing has been found which will supplant gutta-percha for this purpose. The demand for gutta-percha is, therefore, almost unlimited and the price it commands makes it a very profitable commodity to handle. At present the supply is so short that the mere laying of an American cable some time ago raised the price nearly 50 per cent.

**RAILWAY FREIGHT CHARGES.**—Railroad freight rates were discussed at a joint meeting of the Railway and Transportation Committee and the Freight Rates Committee of the Toronto Board of Trade, and a resolution approved of asking the Government to make an investigation into the charges made by the railroads.

There was before the meeting a resolution of the Council of the Board, which was moved some time ago by A. E. Kemp, M.P., to the effect that in order that the Government may be fully seized of all the conditions in connection with the transportation question in respect to freight rates, it should make inquiries as to what the rates of freight are throughout the Province of Ontario, as compared with what they are where like conditions prevail in the United States, on similar classes of merchandise and produce; also in respect to freight rates charged on farm and on manufactured produce for export from points in the United States where like conditions prevail. This resolution was adopted.

In the discussion over the resolution the opinion was generally expressed that a royal commission should be appointed to make an exhaustive inquiry into the whole matter of railroad charges.

The Galetta Milling Co., Galetta, Ont., has been incorporated with a capital of \$50,000, to manufacture flour and feed. The provisional directors include G. C. Whyte, D. MacLaren, Galetta, and J. Taylor, Fitzroy, Ont.



**Everything Electric**

Our business includes everything Electric, from a bell for your house to a lighting or power plant for your town. But small or great, our work is always done well and at close prices.

**R. A. L. GRAY & CO.**  
 85 YORK STREET  
 TORONTO

**Dominion Oil Cloth Co.**

(LIMITED)

Manufacturers of....

**OIL-CLOTHS** of Every Description

*Floor Oil-Cloth, Table Oil-Cloth, Carriage Oil-Cloth, Enamelled Oil-Cloth, Stair Oil-Cloth, etc.*

Office and Works:  
 Cor. St. Catherine and Parthenais Sts.  
 MONTREAL, Que.



By Special Warrant

The Publishers announce the preparation of the Sixteenth Edition of the Directory of

**MERCHANTS, MANUFACTURERS & SHIPPERS OF THE WORLD**

Containing Classified Trade Lists of the Importers and Exporters, Merchants and Manufacturers of the United Kingdom and all principal trading centres of the World. The work contains nearly 4,000 pages, and includes in addition to the above the Customs Tariffs for every Country and all classes of Goods.

HIGHEST AWARD, GOLD MEDAL, PARIS, 1900.

Also in course of preparation, the ninth edition of

**THE BUILDING TRADES DIRECTORY OF GREAT BRITAIN**

Comprising every trade and profession in any way connected with Architecture and Building. The only work of its kind published.

For further particulars, charges for advertisements, etc., apply,

**Kelly's Directories, Ltd., London, Eng.**  
 (ESTABLISHED 1799).

Dominion Branch—71 Victoria St., Toronto, Ont.  
 W. P. DENT, - Manager.

Branches at Paris, Hamburg, New York, Bombay, Calcutta, Cape Town, Melbourne, Sydney, Dunedin, etc.



**.. TO MANUFACTURERS ..**

**GORDON, DRUMMOND & CO.**

134 LONDON WALL

LONDON, E. C., ENG.

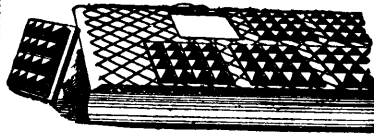
Desire the representation in Europe of a  
FIRST-CLASS MANUFACTURER.

References kindly permitted to the Editor  
of this journal. Address as above.

Telegrams: "Bierenate, London," A B C code used.  
Bankers: London City and Midland.

**THE PATENT INTERCHANGEABLE  
RUBBER TREAD**

14 Gold Medals &  
other Awards.



Silent Non-Slip  
Tread. Unwearable.

For Public Institutions, Warehouses, Offices, etc.  
The Treads consist of a metallic keeper, fitted with  
pieces of rubber (specially prepared), which form  
the wearing surface, and can be renewed when  
worn, by anyone in a few minutes.

**WILLIAM GOODING, Manufacturer,**  
North Road Works, Holloway, London, N. Eng.

**OPPORTUNITIES.**

The following enquiries have been re-  
ceived at the offices of the High Com-  
missioner for Canada in London, and  
at the Canadian Section of the Imperial  
Institute, London, England.

**NOTE.**—Those who may wish to corres-  
pond with any of these enquirers can  
obtain the names and addresses by  
applying to **THE CANADIAN MANUFAC-  
TURER, Toronto.** No charge for giving  
information. When writing refer to the  
numerical number to the enquiries.

595. Enquiry is made for the name of a  
first-class firm of Canadian oven builders  
who would be prepared to work a patent  
oven for which the patent in Canada is  
fully secured.

596. A list of wholesale druggists sun-  
drymen in Canada is asked for by a firm  
of wholesale stationers in London.

597. A Birmingham firm asks to be  
placed in communication with one or two  
large exporters of cheese from Canada.

598. A Dundee firm having opened a  
department for the sale of wood pulp,  
would be glad to know of a Canadian  
exporting firm wishing to appoint an  
agent for Scotland.

599. A Bradford, Eng., firm desires to  
be placed in communication with umbrella  
manufacturers in Canada.

600. A firm in the Midlands asks for  
information respecting the possibility of  
opening up a trade with Canada in several  
brands of British-made cigars.

601. The addresses of Canadian car-  
riage manufacturers are asked for by a  
correspondent who is prepared to take up  
the agencies of such firms for the United  
Kingdom.

602. A Huddersfield firm asks to be  
referred to the principal firms in Canada  
who are merchants in woolen and  
worsted goods.

603. A London firm who are in a  
position to sell large quantities of Cana-  
dian hay will be glad to hear from parties  
open to ship for the English market.

604. Enquiry is made for the addresses  
of Canadian asbestos works where as-  
bestos yarn and cloth is spun.

605. A Liverpool house is desirous of  
obtaining a good agency for Canadian  
produce.

606. The makers of lifting machinery,  
chain pulley-blocks, hoists, cranes, girder  
work, etc., are making inquiry respecting  
the opening for a trade for these goods in  
Canada.

607. A firm of trunk makers wish to  
correspond with Canadian exporters of  
wooden slats in various lengths from  
twenty-eight to forty-two inches.

608. A dealer in County Longford,  
Ireland, asks to be placed in communica-  
tion with exporters in Canada of flour,  
furniture, bedding, boots, shoes and hard-  
ware.

609. A Lancashire company asks to  
be placed in touch with Canadian pro-  
ducers of pig iron who are in a position  
to fill export orders.

610. A London firm possessing a good  
connection among the wholesale trade is  
prepared to take up the sale of Canadian  
pharmaceutical products suitable for this  
market.

**KINLEITH PAPER COMPANY**

MANUFACTURERS OF

Book, Writing  
Envelope and Cover **PAPERS**

LIMITED



AND SPECIALTIES

MILLS AND HEAD OFFICE

St. Catharines, Ont.

**EDWARD FINLAY**

MANAGING DIRECTOR.

**McLaren Electric & Gasoline Motor Co., LIMITED.**

94 ADELAIDE  
ST. WEST.  
TORONTO

**MAKE** Gas or Gasoline Engines from 1 h.p. to 6 h.p.  
Stationary or Marine and Electric Motors from 1/2 h.p. up.  
Motor Carriages for Pleasure or Business. One cent spent for a postal  
will bring you any informa-  
tion you wish.

**"GENUINE OAK" BELTING**

More SOLID LEATHER to the Foot than any Belt made.

**"LANCASHIRE" HAIR BELTING**

FOR EXPOSED SITUATIONS

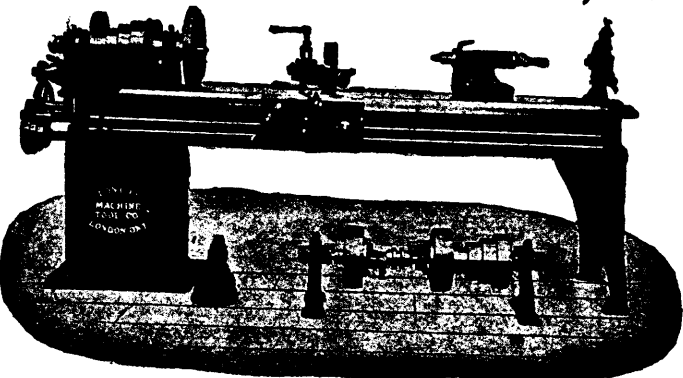
**ENGLISH CARD CLOTHING**

**D. K. McLAREN**

Head Office and Factory, - MONTREAL.

Western Trade, - TORONTO STOCK DEPOT, 88 Bay Street.

**The London Machine Tool Co., LONDON, ONT.**



MANUFACTURERS  
OF

**General  
Machinery**

LATHES,  
PLANERS,  
DRILLS,  
SHAPERS,  
HAMMERS,  
BULL DOZERS,  
PUNCHES,  
PRESSES.

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

**Bellhouse, Dillon & Co.**

30 ST. FRANCOIS-XAVIER ST.

MONTREAL

**DYESTUFFS, CHEMICALS**

AND

**EXTRACTS**

SOLE AGENTS IN CANADA FOR

**KUTTROFF, PICKHARDT & CO'S****ANILINE and ALIZARINE COLORS**

TORONTO OFFICE :

**JAS. HAYWOOD, Agent, 30 Wellington St. E.**

NEW YORK OFFICE :

**DILLON & CO., 20 Cedar Street.****STEAM USERS**TRY . . **VULITE**

As used by His Majesty's Government.

**VULITE** is a powerful vegetable disin-crustant. No acids. No alkali.**VULITE** will not affect the naked steam in color, taste or smell.**VULITE** will save you time, money and vexation.**VULITE** is what Canada wants.**WRITE FOR PARTICULARS.****Vulite Syndicate, Limited**

40 William Street,

Finsbury, London, E.C., Eng.

**Wanted—An Active Representative for Canada****THE PATENT CLOTHBOARD CO. OF PARRY SOUND**

Limited

**PARRY  
SOUND,  
ONT.,  
CANADA.***Clothboards, Lapping, Rolling  
and Bailing Boards  
Veneers of Ash, Birch, Bass  
and Elm, all thicknesses  
Cheese Box Bands and Rims  
Box Shooks (Small and Light)  
also Crating Material***NOTICE**—The following are the Factory Inspectors for the Province of Ontario:

JAS. T. BURKE, Parliament Buildings, Toronto.

JAS. R. BROWN, Parliament Buildings, Toronto.

MARGARET CARLYLE, Parliament Buildings, Toronto.

O. A. ROCQUE, Orleans, Ont.

Persons having business with any of the Inspectors will find them at the above address.

JOHN DRYDEN, Minister of Agriculture.

**MARKETS.**

This Department of THE CANADIAN MANUFACTURER is devoted to the interests of the Hardware Trade.

THE CANADIAN MANUFACTURER is distributed to the Wholesale and Retail dealers in Hardware, to manufacturers of Agricultural Implements, of Iron and Wood-working Machinery, of Electrical Appliances, of Steam Engines and Boilers, to Engineers and Foundrymen, and to Dealers in Machinery and Steam Fitters' Supplies throughout Canada. There are more than 10,000 manufacturing concerns in Canada which use Steam as a Motive Power. We reach them all. Every recipient of this paper is a buyer of Hardware of one kind or another; and Advertisers will do well to bear this in mind.

Following are reports and observations relating to the markets of Canada and elsewhere, having reference to Hardware, Metals, Paints, Oils and such specialties as are usually handled by jobbers and dealers in such goods. Following these items will be found current market quotations on such goods, and the trade are requested to suggest to the publishers any improvements by which it is believed the quotations may be rendered as correct and valuable as possible.

TORONTO, November 15.

Trade conditions, according to Toronto wholesalers, are fully up to expectations. The various houses have been kept busy for several weeks on sorting up orders, and travellers returns are of such a character as to warrant a continuance of the good times. In a few isolated cases payments have not been satisfactory, but in general trade there is nothing to complain of. A steady business is reported in heavy lines of dry goods with increased activity in fancy goods, due to the approach of the Christmas holidays. In staple lines prices rule firm, and in hardware and metals there is a firm trade at unchanged prices. In groceries the feature of the market has been a reduction in the prices of all kinds of sugars. Teas and coffees are quiet, and in other lines there is a steady demand with no change on quotations.

In the speculation market, especially on Wall street, the trading during the past week has shown heavier sales than for some months. The bull traders have had a splendid ining, and conditions warrant a continuance of the upward movement all along the line. The frequent prediction that monetary conditions would prevent active speculation has fallen flat. Viewing the list of active stocks for the past few weeks it will be observed that one or two issues, have every few days, been singled out for special activity. The larger portion of the list has now been brought up to about parity and with a continuance of the bull aggressiveness, prices will reach a much higher level. It is said that many Canadian speculators are wanting to get out of New York stocks, having carried a long line of specialties for some months. Twin City has made a movement for the better and shows a gain of about three points. C.P.R., however, has disappointed a great many. It was purchased for a rise some time ago, on the increased earnings, and its inactivity is unexplainable, except that London has not yet taken into consideration the question of earnings. Great faith, however, is placed on C.P.R., and there appears to be no anxiety to sell at present prices.

Of interest to grain men is the talk of placing a duty on wheat imported into England. The London Times in a leading editorial favors the duty, recalling the taxation of 1866, when heavy tea and

sugar duties were imposed, when imported timber was taxed, and when a duty of a shilling a quarter was placed on imported corn, and yet the nation at that time did not complain of overtaxation. Sir Bernard Samuelson declares outright in favor of tariff for revenue, and argues that it has served well in Germany ever since Bismarck introduced it. He suggests a general duty of 10 per cent. on imported manufactures, and 7½ per cent. on articles of food and drink which are now exempt from taxation, while raw materials should be left untouched.

Under arrangements of the kind The Times says it would be easier to make compacts and concessions in dealing with the colonies and foreign countries, and the reasons in favor of such a system are greatly strengthened by the development in trusts which possess the power of flooding the British market, for a time at least, with goods which are sold below cost price in order to cheapen production and maintain remunerative trade in their home markets.

Fire losses in Canada and the United States during October totalled \$14,749,000, or more than double the losses of October, 1900, and about \$2,700,000, more than in the corresponding month in 1899. In October 1899 the total loss was \$12,046,250, and in 1900, \$7,107,000.

According to a New York despatch it is said that owing to the demoralization in the price of steel and iron in Germany, United States Steel Corporation is importing steel billets from that country.

The largest amount of brandies, wines and liquors ever bonded in Toronto is reported this season. These importations are not the result of an expected increase in the tariff, but the result of an increasing demand. The goods are expensive and show the general prosperity of the country.

BRITISH PIG IRON MARKET.—Messrs. Wm. Jacks & Co., 49 Leadenhall street, London, E.C., England, under date of

**GALVANIZING**

We are prepared to attend to all orders **Promptly and Economically.**

**WINDMILLS, PUMPS, TANKS, Etc.****ONTARIO WIND ENGINE and PUMP CO.,**

LIMITED,

**95 ATLANTIC AVE., TORONTO.**

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

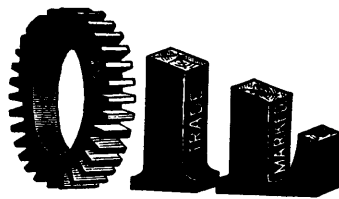
# "Capitol" Cylinder

"RENOWN" ENGINE

"ATLANTIC" RED

RELIABLE WELL-KNOWN BRAND

ALL ORDERS PROMPTLY FILLED



THE QUEEN CITY OIL CO. LIMITED  
SAMUEL ROGERS, Pres. TORONTO, Canada.

## THE EUGENE F. PHILLIPS ELECTRICAL WORKS

MONTRÉAL, CANADA (LIMITED)

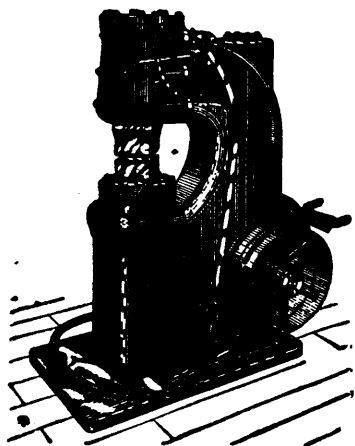
**BARE and INSULATED ELECTRIC WIRE**

ELECTRIC LIGHT LINE WIRE,  
INCANDESCENT AND FLEXIBLE CORDS,

**RAILWAY FEEDER and TROLLEY WIRE**

RUBBER-COVERED, MAGNET, OFFICE AND  
ANNUNCIATOR WIRES.

CABLES FOR AERIAL and UNDERGROUND USE.



### The "YEAKLEY" Vacuum HAMMER, Patented

Is unique and unequalled by any other Power Hammer for its Simplicity, Power, Ease in Operating and Fewness of Parts; Nothing to Break, no Steam to Leak, no Pipes to Freeze, no Delays, no Expense for Repairs.

SEND FOR CATALOGUE.

**GEORGE BRUSH**

SOLE CANADIAN MANUFACTURER,

MONTRÉAL

## PACKARD

MAKERS OF

ELECTRIC COMPANY LIMITED

# LAMPS AND TRANSFORMERS

SOLE AGENTS FOR CANADA

SCHIEFFER RECORDING WATT METERS

ST. CATHARINES, - CANADA

October 25, 1901, quote as follows: "Since writing you last the pig iron market has been steady in tone, and there seems to us to be every prospect of a sharp advance in prices for near delivery.

To-days prices are as follows:—No. 1 Gartsherrie, 67/-f.o.b. Glasgow, including dues; No. 3 Gartsherrie, 56/9-f.o.b. Glasgow, including dues; Nos. 1, 2 and 3 Cumberland Hematite, 67/6-f.o.b. Liverpool; Nos. 1, 2 and 3 Cumberland Hematite, Special Analysis, 72/-f.o.b. Liverpool; DTN Hematite Pig Iron in small pigs, 82/6-f.o.b. Liverpool; Goldendale Cylinder Pig Iron, 83/6-f.o.b. Liverpool.

BRITISH PIG IRON OUTPUT.—Statistics collected from the makers by the British Iron Trade Association show that in the first half of the year 1901 the output of the Kingdom was 3,884,544 tons, as against 4,540,403 tons in the first half of the previous year, a decrease of 655,859 tons. This indicates a total production in 1901 of less than 7,800,000 tons. The production in 1900, as shown by British Iron Trade Association statistics, amounted to 8,908,570 tons. For 1899, according to Government reports, it was 9,421,435 tons. If the output in the United States this year reaches 15,500,000 tons, as now seems likely, it will be nearly, if not quite double that of Great Britain.

BUFFALO PIG IRON MARKET.—Office of Rogers, Brown & Co., Buffalo, N.Y., Nov. 13.

The most interesting feature of the past week has been the heavy buying of foundry iron by consumers in the district tributary to this market; probably as large a tonnage has been placed as during any week of the past year. These sales added to the engagements previously entered, have practically taken the local furnaces out of the market for the first half of next year.

The principal local producer has sold all that its furnaces can make up to next April and booked quite a little tonnage running through to December, 1902.

Under these conditions prices have recently advanced through the successive steps of stiffening, asking and getting a total of 50 cents per ton.

A wise conservatism pervades the trade and while conditions are as favorable for sensational advances as they were at the beginning of the last crazy boom the temper of sellers is against any material changes in prices.

We quote below on the cash basis, f.o.b. cars Toronto, in bond:

Lake Superior Charcoal	\$20 00
No. 1, X. Tonawanda Scotch iron	17 50
" 2, " " "	17 00
" 1, " Niagara iron	17 50
" 2, " " "	17 00
5% Silicon Mannie Charcoal softener	17 50
3% Silicon Mannie Charcoal softener	17 00
Connellsville 72 hour Foundry coke	5 10

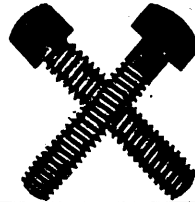
BRITISH PARCEL POST REGULATIONS.—The Canadian Post-office Department makes the following announcement:—The

**The Diamond Machine and Screw Co., Limited**



MANUFACTURERS OF  
**OAP AND SET SOREWS, STUDS, Etc.**  
**Finished and Semi-Finished Nuts**

TORONTO, - CANADA



**The Rehder Plating & Mfg. Co.,**

**THOROLD, - ONT.**  
Manufacturers of  
**Stove and Piano Trimmings and Novelties**  
Fine Grey Iron Castings a Specialty.  
Nickel, Copper and Brass Electro Plating.  
WRITE FOR PRICES.

importation of the following articles into the United Kingdom by parcel post is prohibited: Letters, explosive and dangerous articles; foreign reprints of British copyright works; acetylene, extracts or other concentrations of coffee, chicory, tea, or tobacco, snuff work, tobacco stalks, tobacco stalk flower, prison-made goods, saccharine and substances of a like nature or use; rags, shoddy and live animals (except bees in properly constructed cases). The parcel post to the Transvaal, which has been restricted for some time past to parcels addressed to the army, is now open to parcels addressed to civilians.

**NEW WIRELESS SYSTEM OF TELEGRAPHY.**  
—The new wireless system of telegraphy, called the *Armorli* system, compounded of the names of the inventors, J. T. Armstrong and Ariel Orling, recently successfully experimented with in England, discloses some points of superiority over the Marconi system, which will probably render it exceedingly valuable.  
The new invention does not use the air for transmission, as does that of Marconi.

The electric waves are sent through the ground, and one charm is the simplicity and cheapness of the electrical installation. There are no tall masts, as are used at present, to hoist the sending and receiving points far into air, out of the reach of interference.

There can be no interference by the *Armorli* system. Mr. Armstrong has discovered that he can vary the pitch or tone in which the radiations are sent, much after the fashion of the quadruplex and duplex systems in telegraphy, by which the electric currents are divided, and pass each other on one wire without interference.

There are 40,000 different tones, no one of which will conflict with another, so the chance of two tones of the same nature meeting and destroying one or both is reduced to one in 40,000.

The experiments were made at the home of Mr. Armstrong, in Buckinghamshire. The conditions were of the worst, since a heavy rain had fallen for twenty-four hours, and there was a thick fog enveloping everything. Nevertheless, the experiments were absolutely satisfac-

tory to the experts invited to witness them. The entire outfit for either end of the work was readily carried in the hands of one man. A set was taken out to a field and a spike attached to each was stuck into the ground, 1,500 feet apart.

The apparatus for telephoning differs from that for telegraphing, but both occupy a small compass. That for the transmission of power will fill greater or less space, according to the amount of power required, but, in any case, it is remarkably small.

The experiments consisted in telephoning, in transmitting the ordinary Morse signals (dots and dashes), in manoeuvring a torpedo in a small lake by the development of which feature it may be seen that the newest and strongest of fortifications can be rendered useless; the lighting of a lamp in a house two miles and a half away by pressing a button, the extinguishing of the light by again pressing the button, and the exchanging of signals between ships. The torpedo was made to execute the strangest of evolutions at the will of the operator, and suggested by those who looked on.

**Northrop Iron Works**

**IRON and BRASS  
FOUNDERS**

**Heating and Ventilating Engineers,**

OFFICE and SHOWROOMS :

**296**

**ST. JAMES STREET,  
MONTREAL**

Phone Main 4180



WORKS and HEAD OFFICE :

**Valleyfield, P.Q.**

Canada

Phone No. 2

MANUFACTURERS OF

**"HANDY" ELEVATORS**  
STEAM, HOT WATER  
and GAS RADIATORS

**"HANDY" . . . . .  
DUMB WAITERS**  
SECTIONAL HEATING  
BOILERS . . . . .

**PLAIN AND  
AUTOMATIC LOOMS**  
SPOOLERS, WARPERS

**FIRE  
DOOR FIXTURES**

**SANITARY OUTFITS  
FOR MILLS AND  
FACTORIES . . . . .**

**VENTILATING and  
EXHAUST FANS . . . . .**

**TOOL GRINDING  
MACHINERY . . . . .**

**NICKEL AND BRONZE  
PLATING . . . . .**

**PATENT HANGERS  
AND COUPLINGS . . . . .**

**MODEL AND PATENT  
MACHINERY . . . . .**

WRITE FOR QUOTATIONS

STURTEYANT

---

FORGES

---

35 Styles and Sizes  
Perfect Workmanship  
Substantial Designs  
Carefully fitted mechanism

— ALSO —

- Blowers
- Exhausters
- Steam Fans
- Electric Fans
- Engines
- Electric Motors
- Generating Sets
- Exhaust Heads
- Steam Traps
- Heating
- Ventilating
- Drying Apparatus
- Mechanical Draft

153

---

B.F. STURTEYANT & CO. BOSTON.

NEW YORK PHILADELPHIA CHICAGO LONDON

## THE CANADIAN COLORED COTTON MILLS COMPANY.

Cottonades, Tickings, Denims,  
Awnings, Shirtings,  
Flannelettes, Gingham,  
Zephyrs, Skirtings,  
Dress Goods, Lawns,  
Cotton Blankets,  
Angolias, Yarns, etc.

Only Wholesale Trade Supplied.

**D. MORRICE, SONS & CO.**  
AGENTS  
MONTREAL and TORONTO.

**W. G. McNEILL THOMPSON**  
CONSULTING ENGINEER

M. Inst. C. E.,  
M. Can. Soc. C. E., M. Am. Soc. C. E.  
59 JAMES ST., - ST. CATHARINES, ONT.

Manufacturing Concerns will find it to  
their interest to correspond with

**ULRICH PETERS, M.E.**  
3527 N. 17th St.

FOR **PHILADELPHIA, PA.**  
DESIGNS OF PULP and PAPER MACHINERY

**I** BUY all Minerals at Mines by contract or otherwise. Mineral Lands and Timber Properties bought and sold.  
**H. FAWCETT HARTLAND,**  
Room 309-310 Merchants Bank Chambers,  
205 St. James Street, Montreal.  
Correspondence Solicited.

**TALISMANIC BELT DRESSINGS**  
WILL INCREASE YOUR POWER



"What We're On We'll Cling To."

**TALISMANIC BELT CLING**—For Leather Belts  
**TALISMANIC RUBBER FACING**—For Rubber Belts  
**TALISMANIC ROPE PRESERVER**

**JOHN W. BOWDEN & CO.**  
330 Clinton Street, Toronto, Ont.

**FALSE LABELS.**—In November, 1898, a circular was issued by the Inland Revenue Department calling the attention of its officers and of cigar manufacturers to the fact that certain persons licensed under the Inland Revenue Act were committing offences under the Criminal Code in imitating foreign labels. Collectors were advised that the department could not become a party to such frauds, by permitting the issue of such goods bearing a Government stamp, and were instructed to act in accordance with this decision. Extracts from the Criminal Code were appended thereto, and the request was made that each cigar manufacturer be supplied with a copy.

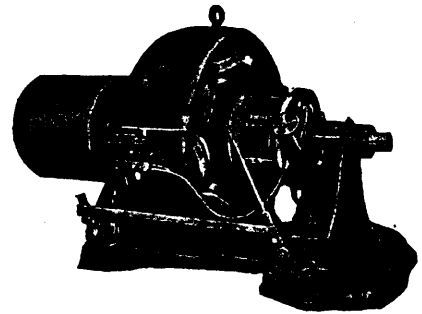
Notwithstanding this intimation to the trade, the department has had its attention called to instances where cigar manufacturers persist in putting their goods upon the market under a "false trade description," inasmuch as the label used is reasonably calculated to lead persons to believe that the goods are the manufacture or merchandise of some person other than the person whose manufacture or merchandise they really are. The department again brings the provisions of the above-mentioned code under the notice of manufacturers in order that they may not render themselves amenable to penalties.

In a case where a manufacturer continues to use labels or brands which are a "false trade description" within the meaning of the Criminal Code, there is no other course open to the department other than to refuse to issue stamps to cover such goods. The department trusts that it will have the hearty co-operation of all manufacturers in its efforts to have the law observed, and that no occasion will arise of its being compelled to resort to the extreme measures laid down in the Act.

**THE LONG, THE SHORT AND THE BIG HAUL.**—The Kamloops, B.C., Sentinel, required to purchase some new machinery in Montreal, and in communicating with the Montreal manufacturers asked for an estimate upon the freight charges to Kamloops. In reply the Montreal firm wrote:—We beg to say that the Canadian Pacific Railway have quoted us a charge of \$3.70 per 100 pounds. The machine on skids weighs about 1,200 pounds, and that is the weight you would need to figure on. We must say that this rate is rather expensive, as the Canadian Pacific Railway takes similar freight from here to Sydney, Australia, at \$1.50 per 100 pounds.

The Sentinel thus comments:—We have figured out that it would be cheaper for us to have this machinery shipped through to Sydney, Australia, and re-shipped to Kamloops. Presumably the Canadian Pacific Railway charge something for the transcontinental haul, say fifty cents per 100 pounds, so that we should get the machinery out to Sydney and back again to Vancouver for \$2.50 per 100 pounds, and the local rate from Vancouver to Kamloops being \$1.09 per 100 pounds, there would be a saving to us of eleven cents per 100 pounds by this roundabout route, which would probably

## The Jones & Moore ELECTRIC CO. ELECTRICAL CONTRACTORS



DYNAMOS, TELEPHONES, SLOW  
SPEED MOTORS, MOTORS, SUPPLIES,  
DIRECT CONNECTED DYNAMOS.

We manufacture Direct Current Machinery in  
all sizes and for any purpose.

20 and 22 ADELAIDE W.,  
TORONTO.

## KERR'S

"COPPER-ALLOY"

## DISC VALVES

ARE THE BEST

—FOR—

## HIGH STEAM

ASK YOUR DEALER  
FOR THEM.  
CATALOGUE SENT  
ON APPLICATION.

## THE KERR ENGINE CO.

LIMITED

WALKERVILLE, - ONTARIO

## MILL TELEPHONES

**F. O. PLUMMER**  
Boston, Mass., U.S.A.

## PATENTS

Home and Foreign Patents Procured at  
Lowest Rates

Patent Rights Sold on Commission.  
Prompt Attention guaranteed to all business  
entrusted. Write for full particulars.

**THE TORONTO PATENT AGENCY, Limited,**  
Confederation Life Bldg., Toronto, Can.

Advertise in Canadian Manufacturer.  
Send for rates.

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

compensate us for the loss of time. It is funny, when you come to think of it, that a merchant in Sydney, Australia, can get freight hauled from Montreal at \$2.20 per 100 pounds cheaper than a merchant in Kamloops. There's something about that long-haul theory that no man outside a railroad freight office can understand. There is, but about the big haul of the Canadian Pacific there can be very little misunderstanding.—The Globe.

**DEARTH OF FREIGHT CARS.**—The officials of the Canadian Pacific Railway Co. at Montreal have been advised that the fine weather of the past few weeks has wonderfully assisted in the movement of crops. Over 250,000 bushels are being marketed daily. Although the C.P.R. has over twenty thousand freight cars, car hunger is still talked about. The shops both in Montreal and Perth, are turning out freight cars at the rate of from five to ten per day, yet the demand is always for more. This is always the way at this season of the year, and the dearth of cars is complained of in the Western States as well. When the wheat crop is gathered in there is a tremendous rush to have it marketed, and no railway could keep enough cars on hand to handle the whole crop at a given moment.

**A STANDARD BOX CAR.**—A standard box car for the railroads of the United States, Canada and Mexico has been adopted at the semi-annual meeting of the American Railway Association held in St. Louis last month. The dimensions call for a car thirty-six feet long, eight feet six inches wide and eight feet high, inside measurement, making a cross-section of sixty-eight square feet, the car having a capacity of 2,448 cubic feet. Side openings to be six feet wide. The committee on the standard dimensions of box-cars and car service worked on the question of standard freight box-

cars two years and a-half, and the adoption of its recommendations was considered the most important action taken by the meeting.

**ILLEGAL WEIGHING MACHINES.**—Complaint has been made to the Inland Revenue Department that in certain parts of the country improper weighing machines are being used for weighing articles mentioned in section 16 of the Weights and Measures Act, such as cereals, seeds, lime, bituminous coal, potatoes, turnips, onions, etc. Under the law no weighing machine can be used to weigh any of these articles that is of a less certified capacity than one bushel. Inspectors of weights and measures have been notified to confiscate all weighing machines so illegally used.

**BUSINESS CHANGES.**

FROM BRADSTREETS.

**ONTARIO.**

- CLARKSBURG—Shipe Mfg. Co., rims, skewers, etc., plant, etc., advertised for sale.
  - FERGUS—T. E. Bissell, mfrs. disk harrows, etc., removed to Elora.
  - HAMILTON—Harvey, Norman Spice Co., obtained charter.
  - LONDON—John Campbell, & Son, mfrs. carriages, John Campbell deceased.
  - OTTAWA—Consumers' Electric Co., obtained charter.
  - PERTH—Perth Canning Co., factory and machinery advertised for sale.
  - TAMWORTH—Wm. D. Mace, saw and grist mill, sold to L. J. Squair.
  - TORONTO—Arnold Chemical Co., sheriff's sale advertised.
  - Toronto Navigation Co., assigned to A. C. Neff, Toronto.
  - Colonial Construction Co., obtained charter.
  - Gilpin, Field Co., obtained charter.
  - Peat Industries, obtained charter.
  - WATFORD—Jacob Lawrence & Sons, mfrs. hardwood lumber and staves, loss by fire.
  - WINGHAM—National Iron Works, meeting of creditors.
- QUEBEC.**
- COATICOOK—Gagnon & L'Heureux, mfrs. shingles, registered.
  - FARNHAM—Farnham Brewing Co., Chartrand & Turgeon provisional liquidators.
  - GRANBY—Granby Electrical Works, registered.
  - MAISONNEUVE—Desnoyers & Varin, sash and door mfrs., registered.

- MASSAWIPPI—Hunting & St. Dizier, grist mill, dissolved.
- MONTREAL—M. Alexander & Co., mfrs. hats, etc., dissolved.
- Canadian Wrapper Mfg. Co., dissolved, new partnership registered.
- Canadian Auto Machine Co., registered.
- Canadian Rubber Co., stock and waterproof department damaged by fire.
- Diamond Lighting Co., registered.
- Empire Broom & Woodenware Co., registered.
- Mace Perkins Brewing Co., assets to be sold.
- Montreal Vinegar Works, starting.
- Colin McArthur, Co., wall paper mfrs., portions of stock and machinery damaged by fire.
- Lefebvre, Ryan & Co., mfrs. vinegar, assets sold.
- New England Shoe Co., registered.
- Smith, Patterson Co., importers watches, etc., applied for charter.
- Stark Co-operative Co., registered.
- ST. FRANCOIS DU LAC—St. Lawrence Telephone Co., applied for charter.
- ST. LOUIS DE MILE END—Paradis Milling Co., wood, coal, etc., registered.
- SHAWINIGAN FALLS—Compagnie d'Imprimerie de Shawinigan Falls, applied for charter.
- SHERBROOKE—A. M. Boudreau, carriage maker, registered.
- Montreal Chrome Co., registered.
- THREE RIVERS—Three Rivers Planing Mills, registered.

**NEW BRUNSWICK.**

- CHATHAM—Alex. Robinson, carriage maker, sold to L. B. Barker.
- FREDERICTON—James Barnes Construction Co., incorporated.
- ST. JOHN—Cornwall & York Cotton Mills Co., applying for incorporation.
- ST. STEPHEN—Bean & Davis Mfg. Co., mfrs. clothing, dissolved, succeeded by The Border Mfg. Co.
- Border Mfg. Co., mfrs. wrappers, new co-partnership, Chas. L. Davis, Hill M. Grimmer and Fred. S. White.

**NOVA SCOTIA.**

- NORTH SYDNEY—Cape Breton Boot & Shoe Mfg Co., assets sold to D. D. McKenzie.
- OXFORD—Cumberland Mfg. Co., furniture and planing mill burnt out.
- TRURO—Truro Knitting Mills Co., applied for charter.

**BRITISH COLUMBIA.**

- EXTENSION MINES—C. S. Ryder, hardware, etc. estimated loss by explosion \$2,000.
- VANCOUVER—Murray & Kelly, stone and granite, succeeded by Vancouver Granite Co.
- VICTORIA—Atlin & Canadian Development Co., incorporated.
- Pacific Exploration & Development Co., incorporated.
- Paterson Shoe Co., application to increase capital stock to \$100,000.
- Wellington Colliery Co., increased capital stock to \$2,000,000.

**NORTH-WEST TERRITORIES.**

- EDMONTON—Walter & Humberstone, sawmill, dissolved, John Walter continues.

USE OUR  
**SOLDER**

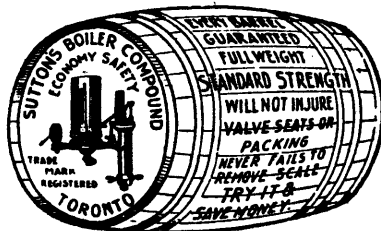
FOR GOOD RESULTS

Wiping Solder  
Market 1/2 and 1/2 Solder  
Guaranteed 1/2 and 1/2 Solder

Prices on Application

**J. N. Callman & Sons**  
HAMILTON, CAN.

**A Money Maker...**



**SUTTON BOILER COMPOUND**

PREVENTS

Loss of life and property, and saves fuel and expensive repairs. Trade mark is on every package for the protection of our customers. For Engineers' Supplies, Oil, Grease, Packings, etc., write

**THE WM. SUTTON COMPOUND CO., OF TORONTO LIMITED**

186 QUEEN STREET EAST

**PERSISTENCE IN ADVERTISING....**

In the expansion of business now bringing profit to so many manufacturers, advertisers who have made themselves regularly prominent in past years have been notable in reaping the rewards of persistent publicity by advertising in .....

The Canadian Manufacturer

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

# HARDWARE, METALS, PAINTS and OILS

Current Prices, Revised to November 15, 1901.

The following quotations represent the prices current in the market, as obtainable by the trade, whether from the manufacturers or the jobbers. Small orders and broken packages usually command higher prices, while lower prices are usually given to larger buyers. The Canadian Customs Duties imposed upon all imported articles enumerated in these lists are published in full in the 1900 Tariff Edition of THE CANADIAN MANUFACTURER. Price 50 cents per copy. The publishers request the trade to suggest any changes and improvements which might be made in these lists, with a view to rendering quotations as correct and useful as possible.

<p><b>ADZES.</b>—Duty 30%. \$13 to \$20 per doz.</p> <p><b>AMMUNITION.</b>—Duty 30%. Caps, Gun, gross. Cartridges, H.B. Cap, Dom., 50 &amp; 5% discount, Can. list. Cartridges, B.B. Cap, Amer., 40% discount, Amer. list. Cartridges, Central Fire, Military and Sporting, Amer., add 5% to list. Cartridges, Central Fire, Military and Sporting, Dom., 15 &amp; 5% discount. Cartridges, Central Fire, pistol size, Dom., 30% discount. Cartridges, Central Fire, pistol size, Amer., 10% discount. Cartridges, Central Fire, rifle size, Amer., 10% discount. Cartridges, Rim Fire, pistol, Amer., 40% discount. Cartridges, Rim Fire, pistol, Dom., 50 &amp; 5% discount. Powder, sporting, Can., \$4.50 per keg 25 lbs. Eng. " " Amer., \$5.50 per keg 25 lbs. blasting, \$2.50 per keg. Primers, Dom., 30% discount. Shells, Brass, Shot, 55% discount. " Trap, loaded or empty, 25% discount. " Rival and Nitro, net. Shot, Buck, Seal or Ball, \$6.62½ per 100 lb. net. (duty 35%). " Chilled, \$6 per 100 lb. net. " Common, \$5.50 per 100 lb. net. Prices are f.o.b. Toronto, Hamilton, Montreal, St. John and Halifax. Terms 3% cash, freights equalized.</p> <p><b>ANCHORS.</b> Small, 30 to 50 lbs., \$7.00 per 100 lbs. 100 lbs. and larger, \$5.00 per 100 lbs.</p> <p><b>ANVILS.</b>—Duty 30%. Baker &amp; Co., 12 to 15 cents per lb. Brook's, 10 to 13 cents per lb. Peter Wright's, 12 to 15 cents per lb.</p> <p><b>AUGERS.</b>—Duty 30%. Eye Augers, 60% discount. Forstner's, 30 " " Gilmore's, 50 " " Irwin's, 30 " " Jenning's, 30 " " Nut Augers, 60 " " Ship Augers, 10 " "</p> <p><b>AXES.</b>—Duty 25%. Bench, \$6.50 to \$14 per doz. Broad, \$38.25 to \$40 per doz. Double-bitted, \$11 to \$13 per doz. Handled, \$3.50 to \$12 per doz. Regular, \$6 to \$10 per doz. Ship Carpenters, \$2 to 25 per doz.</p> <p><b>AXLE GREASE.</b>—Duty 25%. Ordinary, box, \$5.75 to \$6 per gross.</p> <p><b>AXLES.</b>—Duty 35%. Half patent, short beds, 60% discount per set. long " 60%</p> <p><b>BAGS.</b>—Duty 20%. Cotton, seamless, \$14 @ \$24.50 per 100. Jute, \$7.75 @ \$9 per 100.</p> <p><b>BANDS.</b>—Duty 30%. Carriage Hub, 2" x 1½", \$13.00 per set. " " 2" x 1½", 14.00 " " " " 2" x 1½", 15.00 " " " " 2" x 1½", 16.00 " " " " 2" x 1½", 17.00 " " " " 2" x 1½", 18.00 " " " " 2" x 1½", 19.00 " " " " 2" x 1½", 20.00 " " " " 3" x 1½", 21.00 " " " " 3" x 1½", 24.00 " " " " 3" x 1½", 25.00 " " " " 3" x 1½", 26.00 " " " " 3" x 1½", 27.00 " " " " 3" x 1½", 28.00 " " " " 3" x 1½", 29.00 " " " " 3" x 1½", 30.00 " " " " 4" x 1½", 31.00 " "</p>	<p><b>BARROWS.</b>—Duty 30%. See Wheelbarrows.</p> <p><b>BELLS.</b>—Duty 30%. Church, 35 cents per lb. Cow, 60% discount. Door, \$5.50 to \$12 per doz. Farm, \$1.75 to \$4.50 each.</p> <p><b>BELLOWS.</b>—Duty 25%. Blacksmiths', Canadian, 10% discount; Amer., 50% discount. Moulders', \$9.50 to \$15 per doz.</p> <p><b>BELTING (Leather).</b>—Duty 20%. Amer., Hoyt's, regular, 35% discount. Canadian, 55% discount.</p> <p><b>BELTING (Rubber).</b>—Duty 20%. 50 to 60% discount.</p> <p><b>BITS.</b>—Duty 30%. Boker's Center, 75 cents to \$2.60 per doz. Countersink, \$1.50 per doz. Gimlet, U.S., \$1 per doz. Marple's Centre, \$1.30 to \$4.50 per doz. Reamer, \$1.50 per doz. Morse, blacksmiths', 45% discount. Morse, straight shank, 45 " " Morse, taper shank, 45 " " Morse Bit Stock, 50 " "</p> <p><b>BLANKETS.</b>—Duty 35%. Horse, \$18 to \$36 per doz.</p> <p><b>BLOCKS.</b>—Duty 30%. Gin, \$3.50 to \$5 each. Hyper Acme, 15% discount. Weston Chain, 25 " " Wood Pulley, 60% discount. Wrought Iron, 25 " "</p> <p><b>BLUE STONE.</b> Cask lots, for spraying, 7 cents per lb. 100-lb. lots, for spraying, 7½ cents per lb.</p> <p><b>BOLTS.</b>—Duty ½ cents lb., &amp; 25%. Bolt Ends, 62½% discount. Carriage, 60 " " Coach Screws, 70 " " Elevator Bolts, 45% discount. Machine, 60 " " Plow, 60 " " Shaft, 45 " " Sink, 60 " " Sleigh Shoe, 72½ " " Stove, 60 " " Tire, 55 " "</p> <p><b>BOOT, CAULKS.</b>—Duty 20%. Small or Medium, ball, \$4.25 per M. Heel, \$4.50 per M.</p> <p><b>BOOT HEELS or Lifts (Leather).</b>—Duty 25%. Large Size, \$1.15 doz. pairs. Medium Size, \$1.05 doz. pairs.</p> <p><b>BOOT HEELS (Rubber).</b>—Duty 35%. Sizes 6 to 11 (Men's), \$3.50 doz. pairs. " 4 to 5 (Boys'), \$3.35 " " " 0 to 3 (Women's), \$3.25 doz. pair.</p> <p><b>BOOT SOLES (Leather).</b>—Duty 25%. Heavy, \$3.60 doz. pairs. Medium, \$2.90 " "</p> <p><b>BORAX.</b> Lump, 8 cents per lb. Powdered, 10 cents per lb.</p> <p><b>BRACES AND BITS (Carpenters).</b>—Duty 30%. Barber's best, 70 and 10% discount. Spofford's, 50 and 5% discount. Improved, 50 and 5% discount.</p> <p><b>BRICK (Fire).</b>—Duty 20%. Circular, \$35 per M. Square, \$30 per M.</p> <p><b>BRUSHES.</b>—Duty 25%. Canadian list, 50% discount.</p>	<p><b>BUCKLES.</b>—Duty 30%. Double Grip Trace, three loop, tinned and japanned, put up a dozen in a box, 1½", 55 cents per doz.; 1¼", 65 cents per doz. Harness, japanned or tinned, 12 cents per lb. Shoe, japanned or tinned, 12 cents per lb.</p> <p><b>BUTTS.</b>—Duty 30%. Cast Butts, 60% discount. Loose Pin, Bronze, 60 cents to \$2 per pair. Loose Pin, B. Bronze, 30 cents to \$1 per pair. Loose Pin, wrought, 50% discount. Wrought Brass, 50 " " Wrought Iron, 60 " "</p> <p><b>CANT DOGS.</b>—Duty 30%. \$10 per doz.</p> <p><b>CARBIDE, Bicycle.</b>—Duty 25%. In Cases containing 2 doz. 1 lb. cans, \$1.75. " " " 2 " " 2.75. " " " 1 " " 5 " 3.00. In Cans " " 100 lbs., \$3.25.</p> <p><b>CASTINGS (Iron).</b>—Duty 30%. Carriage, in 5 ton lots, 5 cents per lb. " 3 " " 5½ " " " " 2 " " 6½ " " " " 1 " " 5½ " " " " ½ " " 5½ " " " " ¼ " " 5½ " " "</p> <p><b>CASTINGS (Brass).</b>—Duty 20%. 21 to 25 cents per lb.</p> <p><b>CASTINGS (Phosphor Bronze).</b>—Duty 20%. 22 cents per lb.</p> <p><b>CASTORS.</b>—Duty 30%. Bed, 55% discount. Plate, 55 " " Truck, Payson's, 60% discount.</p> <p><b>CEMENT.</b>—Duty 12½ cents per 100 lbs. Belgian, Portland, \$2.50 to \$2.75. Canadian, hydraulic, \$1.25 to \$1.50. Canadian, Portland : Rathbun's, "Star," \$2.35 to \$2.75. " "Beaver," \$2.10 to \$2.50. " "Ensign," \$1.90 to \$2.30. The smaller figures represent car load lots, and the larger less than car loads, f.o.b., Toronto. English, Portland, \$3.</p> <p><b>CHALK.</b> Carpenters', colored, 45 to 75 cents per gross. Crayon, 14 to 18 cents per gross. Red, 5 to 6 cents per lb. White Lump, 60 to 65 cents per 100 lbs.</p> <p><b>CHAIN.</b>—Duty 5%. Brass, Jack, 30% discount. Coil, 3-16, \$11.00 per 100 lb.; ½, \$8.75 per 100 lbs.; 5-16, \$5.50 per 100 lbs.; ¾, \$4.30 per 100 lbs.; 1, \$4.40 per 100 lbs.; 1½, \$4.00 per 100 lbs.; 2, \$3.90 per 100 lbs. Iron, Jack, 25% discount. Safety, 55 " "</p> <p><b>CHISELS.</b>—Duty 30%. Calking, Socket, Framing and Firmer. P.S. &amp; W. Extra, 60, 10 &amp; 5% discount. Warnock's, 70% discount.</p> <p><b>CLEVISES.</b>—Duty 30%. Screw, \$2.50 per doz.</p> <p><b>COLORS.</b>—In oil, see Paints. " —Dry, see Paints.</p> <p><b>CORD.</b>—Duty 25%. Sash, Silver Lake (A), 50 cents per lb.; (B), 40 cents per lb. Baltic, 25 cents per lb. Heroules, 30 cents per lb.</p> <p><b>COTTON DUCK.</b>—Duty 22½%. 36 in. wide, 38 cents per yd. 48 in. wide, 45 cents per yd. 60 in. wide, 57 cents per yd.</p>
--	--	---

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

**CROW BARS.**—Duty 30%.  
5 cents per lb.

**CRUCIBLES.**  
Dixon's, 7 cents per number.

**DRILLS.**—Duty 25%.  
Blacksmiths' \$6 to \$15 each.  
Jardine's, \$7.50 to \$20 each.

**DYES (Aniline).**

**DYNAMITE.**  
30 to 50 cents per lb.

**EMERY.**  
Coarse, 7 cents per lb.  
Fine, 5 cents per lb.

**EMERY CLOTH.**—Duty 25%.  
Beader & Adamson, 40% discount.

**EMERY HONES.**—Duty 25%.  
\$3 to \$5 per doz.

**EMERY STEELS.**—Duty 25%.  
\$2 per doz.

**EMERY WHEELS.**—Duty 25%.  
65% discount.

**EXPANDERS.**—Duty 30%.  
Tube, Dudgeon, 33½ discount.

**FAUCETS.**—Duty 30%.  
Brass, \$2.50 to \$5 per doz.  
Wood, 60c. to \$1.00 per doz.

**FENCING.**  
Barb Wire, \$3.05 per 100 lbs.

**FENCING (Wire).**—Duty 15%.  
Galvanized, barb, f. o. b. Toronto, \$3.05.  
Galvanized, plain twist, f. o. b. Toronto, \$3.05.  
Galvanized, barb, f. o. b. Cleveland, \$2.82½ in  
less than car lots, and \$2.70 in car lots.  
Mesh, 5½x10½, 20 rod rolls 55% discount, Can. list.  
" 4 x8, 20 " 50 & 5½ " "  
" 3 x8, 20 " 55 & 5½ " "

**FERRULES.**—Duty 30%.  
Tool handle, 5c. & 6c. per lb.

**FILES.**—Duty 30%.  
Black Diamond, 50 and 10% discount.  
Globe, 70% discount.  
Grobet, net.  
Jowitz's, 25% discount.  
Nicholson, 50 & 10% discount.  
Stubbs, 15% discount.

**FITTINGS (Pipe).**—Duty 30%.  
Bushings, 55% discount.  
Cast Iron, 55% discount.  
Cocks, 60  
Elbows, tees, crosses, couplings, lock nuts, re-  
turn bends, 50% discount.  
Flanges, 55% discount.  
Nipples, 55  
Plugs, 55  
Unions, 55  
Wrought Iron, 50% discount.

**FLUE SCRAPERS.**—Duty 30%.  
Engineers' Favorite, 40% discount.  
Inglis, 20% discount.  
Wire, 50

**FORKS, HOES AND RAKES.**—Duty 25%.  
50, 10 and 5% discount.

**FUSE.**  
Blasting, Single tape, \$3.75 per M ft.  
" Double tape, \$5 per M ft.

**GASKETS.**—Duty 35%.  
Rubber Insertion, 60 cents lb.

**GAUGE GLASSES.**—Duty 30%.  
Water, 25% discount.

**GAUGES.**—Duty 30%.  
Steam, 50% discount.

**GLASS.**—Duty 20%. (Window—Box Price).  
Star, under 26 in., \$2.15 per 50 ft., \$4.15 per 100  
ft.; 26 to 40 in., \$2.30 per 50 ft., \$4.45 per 100  
ft.; 41 to 50 in., \$4.85 per 100 ft.; 51 to 60 in.,  
\$5.15 per 100 ft.; 61 to 70 in., \$5.50 per 100 ft.;  
71 to 80 in., \$6 per 100 ft.; 81 to 85 in., \$6.50  
per 100 ft.  
D. Diamond, under 26 in., \$6 per 100 ft.; 26 to 40  
in., \$6.65 per 100 ft.; 41 to 50 in., \$7.50 per  
100 ft.; 51 to 60 in., \$8.50 per 100 ft.; 61 to 70  
in., \$9.50 per 100 ft.; 71 to 80 in., \$10.50 per  
100 ft.; 81 to 85 in., \$11.70 per 100 ft.; 86 to 90  
in., \$14 per 100 ft.; 91 to 95 in., \$15.50 per 100  
ft.; 96 to 100 in., \$18 per 100 ft.  
Glass Demijohns or carboys, empty or filled,  
bottles, decanters, flasks, phials, glass jars,  
lamp chimneys, glass shades or globes, cut,  
pressed or moulded crystal or glass table-  
ware, decorated or not, and blown glass  
tableware—Duty 30%.

**GLASS LAMP CHIMNEYS.**—Duty 30%.  
Common Crimp, per doz. O, 43 cents.  
" " " A, 45 " "  
" " " B, 65 " "  
Lead Glass, " " A, 50 " "  
" " " B, 75 " "

**FRUIT JARS.**—Duty 30%.  
Standard pints, \$7.25 per gross.  
" quarts, \$7.75 per gross.  
" half gal., \$10.00 per gross.  
Imperial pints, \$7.75 per gross.  
" quarts, \$8.75 per gross.  
" half gal., \$12.00 per gross.

**GLUE.**—Duty 25%.  
Cabinet, sheet, 12 to 13 cents per lb.  
Common, 8½ to 9 cents per lb.  
Coopers', 19 to 20 cents per lb.  
French Medal, 14 to 14½ cents per lb.  
Gelatine, 22 to 30 cents per lb.  
Hutner, 18 cents per lb.  
Strip, 18 to 20 cents per lb.  
White, extra, 18 to 20 cents per lb.  
LaPage's, 25% discount.  
Progressive, 25

**GOVERNORS.**—Duty 25%.  
Gardners', 25% discount.

**GRANITWARE.**—Duty 35%.  
Firsts, 50% discount.

**GRAIN CRADLES.**—Duty 25%.  
With Scythes complete \$33 per doz.  
Without scythes, \$18.50.

**GRINDSTONES.**—Duty 25%.  
Large, \$1.75 per 100 lbs.  
Mounted, \$3 to \$3.50 each.  
Small, \$1.50 per 100 lbs.

**HALTER MOUNTINGS.**—Duty 30%.  
1x1¼ inch, 10c. per lb.  
(Evans), 1x1¼ in., doz. set packages, \$8.00 per  
gross.

**HALTERS.**—Duty 30%.  
Leather, 1 in. strap, \$3.87½ to \$4 per doz.  
Leather, 1½ in. strap, \$5.15 to \$5.20 per doz.  
Rope, 1, \$9 per gross.  
Rope, 1 to 1, \$14 per gross.  
Web, \$1.87 to \$2.45 per doz.

**HAMMERS.**—Duty 30%.  
Blacksmiths', 10 cents per lb.  
Carpenters', Madoles', \$6.40 to \$8.75 per doz.  
Carpenters', Warnock's, \$4 to \$7.50 per doz.  
Machinists', 22 cents per lb.  
Sledge, 10 cents per lb.  
Tack, 60 cents to \$1.20 per doz.  
Tinners', \$4 to \$6.50 per doz.

**HANDLES.**—Duty 25%.  
Axe, \$1.50 to \$2.50 per doz.  
Chisel, \$3.50 to \$5 per gross.  
Cross-cut saw, \$2 to \$3 per doz.  
File, \$2 to \$3.50 per gross.  
Hammer, 50 cents to \$2 per doz.  
Pick, \$1.50 to \$2.50 per doz.  
Plane, \$3.50 per gross.

**HANGERS.**—Duty 30%.  
Barn Door, round groove, \$4.50 to \$6.50 per doz.  
Lanes, \$6.75 to \$12 per doz.  
Parlor door, \$3 to \$6 per set.  
Stearns, \$5.50 to \$6.50 per doz.

**HARVEST TOOLS.**—Duty 25%.  
Forks, 50 & 10% discount.  
Rakes, 50 & 10 " "  
Hoes, etc., 50 & 10 " "

**HATCHETS.**—Duty 30%.  
Canadian, 40 to 42½ discount.

**HAY KNIVES.**—Duty 25%.  
50, 10 and 5% discount.

**HINGES.**—Duty 1 cents per lb., & 25%.  
Blind, Parker's, 50 & 10 to 60% discount.  
Heavy T and strap, 4 in., 6½ cents per lb.  
" " 5 in., 8 " "  
" " 6 in., 8 " "  
" " 8 in., 5½ " "  
" " 10 in., 5½ " "  
Light T and strap, 65 & 5 off.  
Screw hook and hinge, 6 to 12 in., \$4.50 per 100  
lbs.; 14 in. up, \$3.50.  
Spring, \$12 per gross pairs.

**HOES.**—Duty 25%.  
Grub, \$5 to \$6 per doz.

**HOOKS.**—Duty 30%.  
Brush, \$7.50 to \$9.  
Reaping, 50, 10 and 5% discount.  
Chain, wrought, round or grab, \$3 & \$4.50 per  
doz.  
Lumber Piling, \$7 to \$19 per doz.  
Malleable, wardrobe, \$1.50 to \$2.50 per gross.  
Wire, \$1.25 to \$2

**HORSE NAILS.**—Duty 30%.—See Nails.

**HORSE SHOES.**—Duty 30%.  
Lt. Med. & H., \$3.40 per keg.  
Snow, \$3.95 per keg.  
Steel, \$3.80 to \$5.25 per keg.  
Toe weight steel, \$6.15 per keg.

**HOSE.**—Duty 35%.  
City Standard, 70% discount.  
Phoenix, 60% discount.

**INJECTORS.**—Duty 30%.  
Pemberthy, 65% discount.  
L. J. C., 65% discount.

**IRON.**—See Metals.

**JACKS.**—Duty 30%.  
Lifting, 40% discount.

**KEYS.**—Duty 30%.  
Carpenter, 50 cents to \$1.25 per doz.  
Desk, 25 to 35 cents per doz.  
Mortise Lock, 25 cents to \$1 per doz.  
Padlock, 25 to 35 cents per doz.  
Rim Lock, 25 cents to \$1 per doz.

**KNIVES.**—Duty 30%.  
Butcher, \$2 to \$5 per doz.  
Pocket, \$1 to \$4 per doz.

**KNOBS.**—Duty 30%.  
Door, Bronze, \$7 to \$12 per doz.  
" White Porcelain, 90 cents per doz.  
" Wood, \$4.50 per doz.

**LACING.**—Duty 15%.  
Belt (Raw Hide Cuts), \$1 per lb.  
" (Leather Side Cuts), 75 cents per lb.

**LADDERS.**—Duty 25%.  
Step, 10 cents per foot.  
Rung, 10 cents per foot.

**LAND ROLLERS.**—Duty 20%.  
\$12 to \$15 each.

**LANTERNS.**—Duty 30%.  
Cold Blast, \$7 per doz.  
Dashboard, cold blast, \$9 per doz.  
Japaned, 50 cents per doz. extra.  
No. 0, \$5.75 per doz.  
No. 3 "Wright's", \$8.50 per doz.  
Ordinary, with O burner, \$4 per doz.

**LAWN MOWERS.**—Duty 35%.  
Pennsylvania, 50% discount.  
Stearns, 50  
Woodyatt, 40

**LEAD (Bar and Strip).**—Duty 25%.—See Metals.  
Lead, pig.—See Metals.

**LEAD.**—Duty 5%.  
Red and White, dry.—See Paints.

**LINES (Cotton).**—Duty 25%.  
Chalk, \$2 to \$3.50 per gross.  
Wire, clothes, \$2.50 to \$4.50 per M ft.

**LOCKS.**—Duty 30%.  
Cupboard, \$1.50 per doz. up.  
Desk, \$1.50 per doz. up.  
Drawer, \$1 per doz. up.  
Padlocks, 75 cents per doz. up.  
Rim and Mortise, Peterboro, \$1.50 per doz. up.  
" Amer., \$1.50 per doz. up.

**MALLEABLES.**—Duty 30%. See Castings.

**MALLETS.**—Duty 30%.  
Carpenters', hickory, \$1.25 to \$3.75 per doz.  
Caulking, 60 cents to \$2 each.  
Lignum Vitae, \$3.85 to \$5 per doz.  
Tinmiths', \$1.25 to \$1.50 per doz.

**MATTOCKS.**—Duty 30%.  
Canadian, \$5.50 to \$6.50 per doz.

**MEAT CUTTERS.**—Duty 30%.  
Amer., 25 to 30% discount.  
German, 15% discount.

**METALS.**  
Ingots.—Aluminium, 35 to 50 cents per lb.  
Antimony (Cookson's), 10½ to 11 cents  
per lb.  
" Copper, "English", 18 cents per lb.  
" Bar, 25 cents per lb.  
" Tin, "Lamb & Flag", 32 cents per lb.  
" " Straits, 32 cents per lb.  
" Bar, 33 cents per lb.  
" Zinc, 6 to 6½ cents per lb.; sheets, 7  
cents per lb.  
Babbit Metal (duty 10%).  
Lewis, 7 to 10 cents per lb.  
Magnolia, 25 cents per lb.  
Post's Zero, 25 cents per lb.  
Spooners' Copperine, No. 2, 12½ cents per lb.,  
finest, 25 cents per lb.  
Syracuse Smelting Works, dynamo, 20 cents  
per lb.; special, 25 cents per lb.  
Sheets, Black, Duty \$7 per ton.  
" 10—\$2.65, 100 lbs.  
" 12—\$2.75, " "  
" 14—\$3.10, " "  
Sheets, Black, Duty 5%.  
" 17—\$3.10, 100 lbs.  
" 18—\$3.20, " "  
" 20—\$3.25, " "  
" 22—\$3.30, " "  
" 24—\$3.50, " "  
" 26—\$3.75, " "  
" 28—\$4.00, " "  
Sheets, Tinned—7½ cents per lb., Base price.



## METALS—Continued.

Sheets, Galvanized Iron.  
 17—\$3.80 per 100 lbs.  
 18—\$3.90 "  
 20—\$3.90 "  
 22 to 24—\$4.10 per 100 lb.  
 18 to 24—\$4.50 "  
 26—\$4.25 per 100 lb.  
 28—\$4.50 "  
 16—(Queen Head), \$3.90 per 100 lb.  
 18-22-24—(Queen's Head), \$4.15 per 100 lb.  
 26—\$4.40 per 100 lb.  
 28—\$4.65 "

Sheets, Corrugated—Galv., \$4.50 per 100 sq. ft.  
 Shafting, Bright Steel.—\$3.50 per 100 lb.  
 Shingles, Galv. Iron, Ordinary, \$4.90 per sq. ft.  
 " " Best, \$5.45 "  
 " " Painted Steel, Ordinary, \$3.15 per sq. ft.  
 " " Medium, \$3.35 "  
 " " Best, \$3.50 "

Iron (duty \$7 per ton).  
 " Angle.—\$2.75 per 100 lb.  
 " Bar (Common).—\$1.95 @ \$2.05.  
 " Bar, "Swedes".—\$4.50 per 100 lb.  
 " "Lowmoor".—\$6.50 per 100 lb.  
 " Refined Bar.—\$2.60 per 100 lb.  
 Iron, Planished Sheet (duty 5%)  
 " "A"—\$4.00 per 100.  
 " "B"—\$5.00 "  
 " Russia—\$10.00 per 100 lb.  
 Iron, Galv. Sheet, see Sheets.  
 " and Corrugated, see Sheets.  
 Pig Lead (duty 15%).—Domestic, \$3.75 per 100 lb.; pigs, imported, \$4.25 per 100 lb.; bars, \$5 per 100 lb.; sheets, \$5.50 per 100 lb.  
 Solder bar (duty 25%).—1st, refined, 18 cents per lb.; half-and-half, 18 cents per lb.  
 Iron, Pig (duty \$2.50 per net ton). \$16.50 @ \$17 per ton.  
 Iron, English Horse Shoe.—\$2.85 per 100 lb.  
 Iron, Band.—\$2.05 per 100 lb.  
 Iron, Hoop.—\$2.90 per 100 lb.  
 Beams, Steel.—\$3 per 100 lb.  
 Rods.—Brass, 24 cents per lb., base price; hard sheets, 30 to 30 cents per lb.; soft sheets, 30 to 30 cents per lb.  
 Rails, Small Steel.—\$3 per 100 lb.  
 Steel, Cultivator.—\$4.50 per 100 lb.  
 " Channel.—\$3 to \$4 per 100 lb.  
 " "Firths".—12 cents per lb.  
 " "Crescent".—9 cents per lb.  
 " Cant Hook.—7 cents per lb.  
 " Machinery (in the rough).—\$2.25 per 100 lb.  
 " Machinery.—\$2.75 per 100 lb.  
 " Mild.—\$1.90 per 100 lb.  
 " Sleigh Shoe.—\$1.90 per 100 lb.  
 " Spring.—\$3.00 per 100.  
 " Tire.—\$2.05 per lb.  
 " Toe Caulk.—\$2.20 per 100 lb.  
 Steel, Cast.—Firth's, 12 cents per lb.  
 Jessop's, 14 cents per lb.  
 Black Diamond, 12 cents per lb.  
 Silver, 15 cents per lb.  
 Mushets.—35 cents per lb.  
 Steel, Blister.—12 cents per lb.  
 Steel, Hammer.—7 cents per lb.  
 Steel, Decarbonized Sheet.—7 cents per lb., base.  
 Steel, Black Sheet, Duty \$7 per ton.  
 " 10—\$2.65, 100 lbs.  
 " 12—\$2.75 "  
 " 14—\$3.10 "

Sheets, Black, Duty 5%.  
 17—\$3.10, 100 lbs.  
 18—\$3.20 "  
 20—\$3.25 "  
 22—\$3.30 "  
 24—\$3.50 "  
 26—\$3.75 "  
 28—\$4.00 "

Tank Steel Plate (duty \$7 per ton).—3-16, \$2.60 per 100 lb.  
 Plates, Steel Boiler (duty 10%).—1 and larger, \$2.50 per 100 lb.  
 Steel Boiler Heads (duty 10%).—\$2.60 per 100 lb.  
 Canadian Plates.—All dull, 52 sheets, \$2.90; half polished, \$3.

MOPS.—\$1 per doz.

NAIL PULLERS.—Duty 30%.  
 German and American, \$1.85 to \$3.50 each.

NAILS.—Duty, cut, 1 cent per lb.; wire, 3-5 cent per lb.  
 Chair nails, 35% discount.  
 Clout nails, blued, 65 and 5% discount.  
 Coopers', 35% discount.  
 Copper nails, 52% discount.  
 Cut, 2d \$3.65; 3d, \$3.30; 4 & 5d, \$3.65; 6 & 7d, \$2.90; 8 & 9d, \$2.80; 10 & 12d, \$2.75; 16 & 20d, \$2.70; 30, 40, 50 & 60d (base), \$2.65.  
 Flour barrel nails, 30% discount.  
 Galvanizing, 2 cents per lb. net, extra.  
 Horse (C brand), 50 & 7 1/2% discount.  
 M brand, 50 & 10% discount.  
 Steel cut nails, 10 cents extra.  
 Trunk nails, black, 65 and 5% discount.  
 Trunk nails, tinned, 65 and 10% discount.  
 Wire, 2d \$3.85; 3d, \$3.50; 4 & 5d, \$3.25; 6 & 7d, \$3.15; 8 & 9d, \$3; 10 & 12d, \$2.85; 16 & 20d, \$2.90; 30, 40, 50 & 60d (base), \$2.85; fine, 3d, \$3.85.  
 Wire nails in car lots, \$2.77 1/2.  
 Miscellaneous wire nails, 70 & 10% discount.

NAIL SETS.—Duty 30%.  
 Assorted sizes, \$1.20 per doz.

## NETTING—Wire.—Duty 30%.

Galvanized, 50% discount.  
 Green wire, \$1.50 per 100 sq. ft.  
 Poultry, 2x2 mesh, 150 ft. roll, 55 off Canadian List.

## NOZZLES.—Duty 30%.

Hose (Brass), \$3.50 to \$5 per doz.

## NUTS.—Duty 1 cent per lb. &amp; 25%.

Finished, tapped, 25% discount.  
 Rough, square head, 4 cents per lb. from list.  
 Rough, hexagon head, 4 1/2 cents per lb. from list.  
 Semi-finished, tapped, 25% discount.

## OAKUM.

Navy, \$7.80 per 100 lb.  
 Spun, \$9.30 per 100 lb.

## OIL.—Duty 25%.

Boiled Lined Oil bbls., 86 cents per gal.  
 Cylinder Oil, from 40 cents up.  
 Lard Oil, bbls., 90 cents per gal.  
 Machine.  
 Prime White (Can.), 14 cents per gal.  
 Prime White (U.S.), 15 1/2 cents per gal.  
 Raw Lined Oil, bbls., 83 cents per gal.  
 Sperm Oil, bbls., \$1.75 per gal.  
 Water White (Can.), 15 cents per gal.  
 Water White (U.S.), 16 1/2 cents per gal.

## OILERS.—Duty 30%.

\$1 per doz. up.

## PACKING.—Duty 35%.

Rubber Insertion, 60 cents per lb.  
 Rubber Sheet, 22 cents per lb.

## PACKING.—Duty 25%.

Asbestos, 35 cents per lb.  
 Flax, 35 cents per lb.  
 Hemp, 12 1/2 cents per lb.  
 Jute, 8 cents per lb.

## PAILS.—Duty 25%.

Galvanized Iron, \$2.50 to \$3.50 per doz.

## PAINTS.—Duty 25%.

Elephant Snow White, 8 to 9 cents per lb.  
 Pure White Zinc, 8 to 9 cents per lb.  
 No. 1, 6 to 7 1/2 cents per lb.  
 No. 2, 5 to 6 1/2 cents per lb.  
 Prepared, in 1, 1/2 and 1-gallon tins, \$1.25 per gal.  
 Barn, in barrels, 75 to 85 cents per gal.  
 Canada Paint Co's Pure, \$1.25 per gal.  
 Second qualities, \$1.10 per gal.  
 Sherwin-Williams Paints, \$1.45 per gal.  
 Toronto Lead & Color Co's Pure, \$1.25 per gal.  
 Zanzibar, all colors, 75 cents per gal., f.o.b. Toronto or Windsor.

## PAINTS.—Duty 30%.

Copper, \$3.50 per gal.

## LEAD, DRY WHITE.—Duty 5%.

Pure, in casks, \$5.75 per cwt.  
 Pure, in kegs, \$6.25 per cwt.  
 No. 1, in casks, \$5.50 per cwt.  
 No. 1, in kegs, \$5 per cwt.

## LEAD, WHITE.

Pure, \$6.37 per 100 lb.  
 No. 1, pure, \$6 per 100 lb.  
 No. 2, pure, \$5.62 1/2 per 100 lb.  
 No. 3, pure, \$5.25 per 100 lb.  
 No. 4, pure, \$4.87 1/2 per 100 lb.  
 Elephant and Decorators' Pure, \$7.12 1/2 per 100 lb.  
 Brandram's B. B. Genuine, \$9 per 100 lb.  
 " " Decorative, \$7.55 per 100 lb.  
 " " No. 1, \$6.85 per 100 lb.  
 " " No. 2, \$6 per 100 lb.

## LEAD, RED.—Duty 5%.

Genuine, 560 lb. casks, \$5.50 per cwt.  
 Genuine, 100 lb. kegs, \$5.75 per cwt.  
 No. 1, 560 lb. casks, \$5.25 per cwt.  
 No. 1, 100 lb. kegs, \$5 per cwt.

## COLORS (Dry).—Duty 25%.

American Oxides, \$1.75 to \$2 per 100 lb.  
 Brussels Ochre, \$2 per 100 lb.  
 Burnt Sienna, pure, 10 cents per lb.  
 " Umber, pure, 10 cents per lb.  
 Raw, 9 cents per lb.  
 Canadian Oxides, \$1.75 to \$2 per 100 lb.  
 Chrome Greens, pure, 12 cents per lb.  
 Chrome Yellows, pure, 18 cents per lb.  
 Drop Black, pure, 9 cents per lb.  
 English Oxides, \$3 to \$3.25 per 100 lb.  
 English Vermillion, 80 cents.  
 Fire Proof Mineral, \$1 per 100 lb.  
 Genuine English Litharge, 7 cents per lb.  
 Golden Ochre, 3 1/2 cents per lb.  
 Mortar Color, \$1.25 per 100 lb.  
 Pure Indian Red, No. 45, 90 cents per lb.  
 Super Magnetic Oxides, \$2 to \$2.25 per 100 lb.  
 Ultramarine Blue, in 28-lb. boxes, 8 to 24 cents per lb.  
 Venetian Red (best), \$1.80 to \$1.90 per 100 lb.  
 Whiting, 12 cents.  
 Yellow Ochre (J. C.), bbls., \$1.35 to \$1.40 per 100 lb.  
 Yellow Ochre (J. F. L. S.), bbls., \$2.75 per 100 lb.  
 Yellow Ochre (Royal), \$1.10 to \$1.15 per 100 lb.

## COLORS (In Oil).—Duty 25%.

25 lb. tins, Standard Quality.  
 Chrome Green, 8 cents per lb.  
 Chrome Yellow, 11 cents per lb.  
 French Imperial Green, 10 1/2 cents per lb.  
 French Ochre, 5 cents per lb.  
 Golden Ochre, 6 cents per lb.  
 Marine Black, 9 cents per lb.  
 Marine Green, 9 cents per lb.  
 Venetian Red, 5 cents per lb.

## PAPER.—Duty 25%.

Brown Wrapping, 2 1/2 to 4 cents per lb.  
 Manila Wrapping, No. 1, 4 cents per lb.  
 " No. 2, 5 1/2 "

Carpet Felt, \$45 per ton.  
 Plain building, 35 cents per roll.  
 Tarred lining, 45 cents per roll.  
 Tarred roofing, \$1.65 per 100 lbs.

## PEAVEYS.—Duty 30%.

Round and Duck bill, \$2.50 and \$13 per doz.

## PIKE POLES.—Duty 30%

\$10.50 per doz.

## PICKS.—Duty 30%.

\$4.50 to \$7 per doz.

## PITCH.

85 cents 100 lbs.

## PIPE.—Duty, \$8 per ton.

Cast Iron Soil, Medium and Heavy, 65% discount  
 Light, 60% discount.

## PIPE.

Brass, 25 to 35 cents per lb., base price.  
 Copper, 25 cents per lb., base price.

## PIPE.—Duty 30%.

Galvanized Iron.  
 1/2, \$5.15 per 100 ft.; 3/4, \$5.50 per 100 ft.; 1, \$7.95 per 100 ft.; 1 1/4, \$10.80 per 100 ft.; 1 1/2, \$12.95 per 100 ft.; 2, \$17.35 per 100 ft.

## PIPE, BLACK IRON.—Duty 30%.

1/2, \$4.65 per 100 ft.; 3/4, \$3.40 per 100 ft.; 1, \$3.45 per 100 ft.; 1 1/4, \$3.30 per 100 ft.; 1 1/2, \$3.75 per 100 ft.; 2, \$4.30 per 100 ft.; 2 1/2, \$4.75 per 100 ft.; 3, \$5.00 per 100 ft.; 3 1/2, \$5.75 per 100 ft.; 4, \$4.75 per 100 ft.; 4 1/2, \$5.15 per 100 ft.; 5, \$5.50 per 100 ft.; 6, \$7.50 per 100 ft.

## PIPE.—Duty 30%.

Wrought Iron, 1 inch, per ft. 16 1/2 cents.

## PIPES.—Duty 30%.

Stove, 5 and 6 in., \$7 per 100 lengths.  
 7 in., \$7.50 per 100 lengths.

## PLANES.—Duty 30%.

Bailey's, 40% discount.  
 Canadian wood, 25% discount.  
 Mathieson wood, 20 "

## PLUMBERS' BRASS GOODS.—Duty 30%.

Check Valves, 60% discount.  
 Compression Cocks, 50% discount.  
 Gate Valves, 55% discount.  
 Genuine Jenkins' Valves, 45 "  
 Imitation Jenkins' Valves, 55 "  
 Radiator Valves, 55% discount.  
 Standard Angle Valves, 65% discount.  
 Standard Globe Valves, 65 "  
 Stop Cocks, 65% discount.

## POLISH.—Duty 25%.

Liquid Stove, \$5 per gross.  
 Paste, \$5 per gross.

## PULLEYS.—Duty 25%.

Awning, 25 to 60 cents per doz.  
 Clothes Line, 50 cents per doz.  
 Dodge wood split, 50% discount.  
 Sash, 25 to 27 cents per doz.

## PUMP CYLINDERS.—Duty 25%.

Regular patterns, 65% discount.

## PUMPS.—Duty 25%.

Cistern, 50% discount.  
 Force, 50 "

## PUNCHES (centre)—Duty 30%.

Assorted sizes, \$1.80 per doz.

## PUTTY.—Duty 20%.

In bbls. (Bladders), \$2.10 per 100 lbs.  
 In kegs, boxes or loose, \$2.25 per 100 lbs.  
 In 25-lb. tins, \$2.35 per 100 lbs.  
 In 12 1/2-lb. tins, \$2.65 per 100 lbs.  
 In bulk or tins less than 100 lb., \$2.90 per 100 lbs.  
 " " in bbls., \$1.80 per 100 lbs.  
 " " in less quantity, \$2.05 per 100 lbs.

## RASPS.—Duty 30%.

Blacksmiths, Woodworkers, etc., see Files.

## REGISTERS.—Duty 30%.

Floor and Wall, 50% discount.

## RIVET SETS.—Duty 30%.

Canadian, 35 to 37 1/2% discount.

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

**RIVETS AND BURRS.—Duty 30%.**

Copper Rivets and Burrs, 35 & 5 off; cartoons, 1 cent per lb. extra.  
Extras on Iron Rivets in 1-lb. cartoons, 1 cent per lb.  
Extras on Iron Rivets in 1/2-lb. cartoons, 1 cent per lb.  
Extras on Tinned or Coppered Rivets, 1/2-lb. cartoons, 1 cent per lb.  
Iron Rivets, black and tinned, 60 & 10% discount.  
Iron Burrs, 55% discount.

**ROPE, ETC.—Duty 25%.**

Cotton, 3-16 in. and larger, 16 cents per lb.  
" 5-32 in., 21 cents per lb.  
" 1/2 in., 22 1/2 cents per lb.  
Crucible Steel Rope, 25% discount.  
Galvanized Wire Rope, 25% discount.  
Jute, 8 cents per lb.  
Lath Yarn, 9 cents per lb.  
Manila, 7-16 in. and larger, 13 1/2 cents per lb.  
" 1/2 in., 14 1/2 cents per lb.  
" 1/4 and 5-16 in., 15 1/2 cents per lb.  
New Zealand Rope, 10 cents per lb.  
Russia Deep Sea, lines 1 1/2 cents per lb.  
Sisal, 7-16 in. and larger, 10 cents per lb.  
" 1/2 in., 11 cents per lb.

**RUBBER.**

Reclaimed.

**RULES.—Duty 30%.**

Boxwood, 75 and 10% discount.  
Ivory, 37 1/2 to 40% discount.  
Lumbermans'.

**SAD IRONS.—Duty 30%.**

Mrs. Potts', No. 55, polished, 62 1/2 cents per set.  
" No. 50, nickle-plated, 67 1/2 cents set.  
"Sensible," 55 and 60 cents set.  
"Toy," \$13.00 gross.

**SAND AND EMERY PAPER.—Duty 25%.**

B. & A. Sand, 40 & 5% discount.  
Garnet, 5 to 10% advance of list.

**SAP SPOUTS.—Duty 30%.**

Bronzed iron, with hooks, \$9.50 per 1,000.

**SASH WEIGHTS.—Duty 25%.**

Sectional, \$2.75 to \$3 per 100 lb.  
Solid, \$1.25 to \$2.25 per 100 lb.

**SAWS.—Duty 30%.**

Crosscut, Disston's, 35 to 55 cents per foot.  
Hack, complete, 75 cents to \$2.75 each.  
Hack, frame only, 75 cents each.  
Hand, Disston's, 12 1/2% discount.  
S. & D., 40% discount.  
S. & D., 35 off on Nos. 2 and 3.

**SCALES.—Duty 30%.**

Champion, 60% discount.  
Gurney's, 40  
Troenmer's, 30 " Canadian list.

**SCREEN'S.—Duty 30%.**

Door, \$7.50 to \$12 doz.  
Window, \$1.75 to \$2.75 doz.

**SCREWS.—Duty 35%.**

Bench, iron, \$4.25 to \$5.75 per doz.  
" wood, \$3.25 to \$4 per doz.  
Drive Screws, 87 1/2 & 10% discount.  
Hexagon Cap, 45 " "  
Set, case-hardened, 60 " "  
Square Cap, 50 & 5 " "  
Wood, F. H., bright and steel, 87 1/2 & 10% discount.  
" R. H., bright, 82 1/2 & 10% discount.  
" F. H., brass, 80 & 10 " "  
" R. H., brass, 75 & 10 " "  
" F. H., bronze, 75 " "  
" R. H., bronze, 70 " "

**SCREWS, (Machine, Iron and Brass)—Duty 35%.**

Flat head, 25% discount.  
Round head, 20 " "

**SCYTHES.—Duty 25%.**

Grass, \$8 to \$10.  
Grain, \$12 to \$14.

**SHEARS.—Duty 30%.**

Tailors, 30% discount Amer. list.

**SHELLS (Cartridge).—See Ammunition.****SHOT, See Ammunition.****SHOVELS AND SPADES.—Duty 35%.**

Burns', 40 and 5% discount.  
Ely's, " "  
Gray's, " "  
Jones, " "  
Steel, Snow, \$2.45 to \$2.60 per doz.  
Wood, " "

**SKATES.—Duty 35%.**

American Hockey, " "  
Canadian, " 40 cents to \$2.50 pair.

**SNAPS.—Duty 30%.**

Harness, 40% discount.

**SNATHS.—Duty 25%.**

Sythe, \$5.25 to \$8 per doz.

**SOLDER (Plumbers').—See Metals.****SOLDERING IRONS.—Duty 30%.**

20 to 90 cents each.

**SPIKES.—Duty 1/2 cent per lb.**

Rail, 20% discount.  
Ship, \$5 per 100 lb.

**SPRINGS.—Duty 35%.**

Bright Carriage, 6 1/2 per lb. net.

**STAPLES.—Duty 30%.**

Barb wire, \$3.75 per 100 lb.  
Bed, 50% discount.  
Blind, 25 " "  
Wrought iron, 75% discount.

**STEEL—see Metals.****STOCKS AND DIES.—Duty 30%.**

Blacksmiths', Lightning, 25% discount.  
" Green River, 25 " "  
" Reece, 30% discount.  
" Jardine, 35% " "  
Pipe, Solid, 70 & 10% discount.  
" Duplex, 33 1/2% discount.  
" Jarecki, 33 1/2% " "  
" Oster, 30% " "  
" Armstrong, 35% " "  
Wiley & Russell's, 25% discount, Canadian list.

**STONES.—Duty 30%.**

Arkansas, \$1.50 per lb.  
Hindustan, 6 to 7 cents per lb.  
slip, 9 cents per lb.  
Labrador, 13 cents per lb.  
axe, 15 cents per lb.  
Scythe, \$3.50 to \$5 per gross.  
Turkey, 50 cents per lb.  
Washita, 28 to 60 cents per lb.  
Water-of-Ayr, 10 cents per lb.

**TACKS, BRADS, etc.—Duty 35%.**

Carpet tacks, blued, 80 & 15% discount.  
" " tinned, 80 & 20 " "  
" " in kegs, 40% discount.  
Cheese-box tacks, blued, 85 & 12 1/2% discount.  
Copper tacks, 50% discount.  
Cut tacks, blued, in dozens only, 80% discount.  
" 1/2 weights, 60% discount.  
Fine finishing, 40% discount.  
Leather carpet tacks, 55% discount.  
Lining tacks, in papers, 10% discount.  
Patent brads, 40% discount.  
Picture frame points, 10% discount.  
Strawberry box tacks, bulk, 75 & 10% discount.  
Swedes, cut tacks, blued and tinned, in bulk, 80 & 10% discount; in dozens, 75% discount.  
Swedes, upholsterers', bulk, 85, 12 1/2 & 12 1/2% dis.  
" brush, blued and tinned, bulk, 70% dis.  
" gimp, blued, tinned and jappaned, 75 & 12 1/2% discount.  
Trunk tack, black and tinned, 85% discount.  
Zinc tacks, 35% discount.

**TAGS.—Duty 25%.**

Shipping, 50 @ 70 cents per M.

**TAR.**

Coal \$2.75 bbl.  
Refined, \$4 per bbl.

**TENTS.—Duty 30%.**

Canadian list, 20% discount.

**TONGS.—Duty 30%.**

Ice, \$9 per doz.  
Pipe, "Brown's," net.  
" "Brook's," 25% discount.  
" "Trimco," 25 " "

**TRAPS.—Duty 30%.**

"Hawley & Norton's," 65% discount.  
"Newhouse," 45% discount.  
"Victor," 75% discount.

**TRUCKS.—Duty 30%.**

1, \$3.75; 2, \$5; 3, \$6.75 each.  
"Handy" Canadian, \$16 to \$18.

**TUBES FOR BOILERS.**

1 1/2, 1 1/4, 1 1/8, 1, 3/4, 3/8, 1/2, 1/4, 1/8, 1/16, 1/32 ft.

**TURNBUCKLES.—Duty, 1 cent per lb., 25%; 33 1/2% discount.****TURPENTINE.—Duty 5%.**

55 cents per gal.

**TWINES.—Duty 25%.**

Bag twine, 3-ply, 20 cents per lb.  
4-ply, 20 cents per lb.  
Binding, 12 1/2 cents per lb.  
Colored, 27 cents per lb.  
Cotton bag, 30 cents per lb.  
Cotton, White, 20 to 30 cents per lb.  
" Colored, 30 to 40 " "  
Hemp, 20 cents per lb.  
Jute, 20 cents per lb.  
Mattress, 45 cents per lb.  
Sewing, 45 cents per lb.

**TWINE—Continued.**

Tarred Lath, 11 cts.  
Wrapping, 22 to 27 cts.

**VARNISHES.—Duty 20 cents per gal.**

20% off 5-gal. lots.  
Black Japan, \$2 per gal.  
" No. 1, 75 cents to \$1.50 per gal.  
Brown Japan, \$1.50 to \$2.50 per gal.  
Carriage, No. 1, \$2 to \$3 per gal.  
" body, \$4 to \$6 per gal.  
" rubbing, \$2.50 to \$4 per gal.  
Demar, \$2 to \$2.50 per gal.  
Elastic Oak, \$1.50 to \$2.50 per gal.  
Furniture Brown Japan, \$1.25 to \$2 per gal.  
Furniture, extra, \$2 to \$2.50 per gal.  
" No. 1, 75 cents to \$1.50 per gal.  
Gold Size, Japan, \$1.50 to \$2.50 per gal.  
Hard Oil Finish, \$1.50 to \$2.50 per gal.  
Light Oil Finish, \$1.50 to \$2.50 per gal.  
Shellac, orange, \$2 to \$2.50 per gal.  
" white, \$2 to \$2.50 per gal.

**VICES.—Duty 30%.**

Amer., 13 1/2 cents per lb.  
Brooks', 13 1/2 cents per lb.  
Peter Wright's, 15 cents per lb.

**WASHERS.—Duty 1/2 cent per lb., 25%.**

Buggy, 75% discount.  
Wrought iron, 40% discount.

**WASHING MACHINES.—Duty 35%.**

Re-acting square, \$51.00 per doz.  
Round, \$48.00  
Rocker, \$48.00 per doz.  
Popular Brands, \$30.00 to \$42.00 per doz.  
Dowsell, \$3.75 each.  
Re-acting (Dowsell), \$5 each.

**WIRE.**

Barbed Wire, see Fencing.  
Brass Wire, (duty 10%), 50 to 50 & 2 1/2% discount.  
Copper Wire, (duty 15%), 45 & 10% discount net cash 30 days, f.o.b. factory.  
Smooth Steel Wire, (duty 20%), is quoted at the following net selling prices:  
No. 6 to 8 guage, \$2.90 per 100 lbs.  
" 9 " 2.80 " "  
" 10 " 2.87 " "  
" 11 " 2.90 " "  
" 12 " 2.95 " "  
" 13 " 3.15 " "  
" 14 " 3.37 " "  
" 15 " 3.50 " "  
" 16 " 3.65 " "

Other sizes of plain wire outside of Nos. 9, 10, 11, 12 and 13, and other varieties of plain wire remain at \$2.80, base, with extras as before. The prices for Nos. 9 to 13 include the charge of 10 cents for oiling. Extras net per 100 lb.: coppered wire, 60 cents; tinned wire, \$2; oiling, 10 cents; special hay-baling wire, 30 cents; spring wire, \$1; best steel wire, 75 cents; bright soft drawn, 15 cents; in 50 and 100-lb. bundles net, 10 cents; in 25-lb. bundles net, 15 cents; packed in casks or cases, 15 cents; bagging or papering, 10 cents.

Fine Steel Wire, 17 1/2 off. List of extras in 100 lb. lots, No. 17, \$5; No. 18, \$5.50; No. 19, \$6; No. 20, \$6.65; No. 21, \$7; No. 22, \$7.30; No. 23, \$7.65; No. 24, \$8; No. 25, \$8.9; No. 26, \$9.50; No. 27, \$10; No. 28, \$11; No. 29, \$12; No. 30, \$13; No. 31, \$14; No. 32, \$15; No. 33, \$16; No. 34, \$17. Extras net: tinned wire, No. 17-25, \$2; Nos. 26-31, \$4; Nos. 32-34, \$6; coppered, 5 cents; oiling, 10 cents; in 25-lb. bundles, 15 cents; in 5 and 10-lb. bundles, 25 cents; in 1-lb. hanks, 50 cents; in 1/2-lb. hanks, 75 cents; in 1/4-lb. hanks, \$1; packed in casks or cases, 15 cents; bagging or papering, 10 cents.

Galvanized Wire, per 100 lb.: Nos. 6, 7, 8, \$3.50 to \$3.85; No. 9, \$2.85 to \$3.15; No. 10, \$3.60 to \$3.95; No. 11, \$3.70 to \$4.10; No. 12, \$3 to \$3.30; No. 13, \$3.10 to \$3.40; No. 14, \$4.10 to \$4.50; No. 15, \$4.60 to \$5.05; No. 16, \$4.85 to \$5.35. Base sizes, Nos. 6 to 9, \$2.57 f.o.b. Cleveland.

Clothes Line Wire, solid 7 strand, No. 17, \$4.25; No. 18, \$2.65; No. 19, \$2.35; f.o.b. Toronto, Hamilton and Montreal.

**WASTE (Cotton).**

Colored, \$5.50 to \$6 per 100 lb.  
White, \$7.75 per 100 lbs.  
" extra, \$8 per 100 lb.

**WHEELBARROWS.—Duty 30%.**

Garden, \$2 to \$4.50 each.  
Navy, \$19 per doz.  
" Iron wheel, \$22.50 per doz.  
Steel tubular, \$7.50 to \$10.50 each.

**WRENCHES.—Duty 30%.**

Agricultural, 60% discount.  
Alligator, 50 " "  
Coes', 30 " "  
F.S. & W., 30 " "  
Stillson's, 25 " "  
Trimco, pipe, 25 " "

**WRINGERS (Clothes).—Duty 35%.**

Ajax, \$66 per doz.  
Canadian, \$28 to \$30 per doz.  
Crescent, \$17.50 to \$20 per doz.  
Leader, \$30 per doz.  
Novelty, \$23 to \$27 per doz.  
Popular Brands, \$16.50 to \$22 per doz.  
Royal American, \$26 to \$30 per doz.  
Royal Canadian, \$26 to \$30 per doz.

**ZINC.—See Metals.**

# INDEX TO ADVERTISEMENTS.

Where the follo is not given the Advertisement appears at intervals.

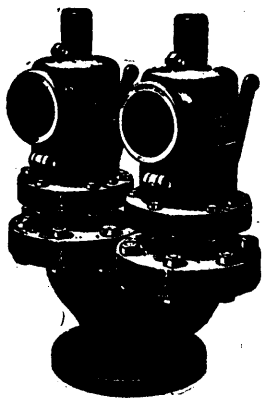
Agriculture, Ontario Minister of Toronto.....	33	Gartshore, John J., Toronto.....	ibc	Northey Mfg. Co., Toronto.....	8
Albert Mfg. Co., Hillsborough, N.B.....	6	Gartshore-Thomson Pipe & Foundry Co., Hamilton, Ont.....	29	Northrop Iron Works, Valleyfield, Que.....	35
American Steam Gauge & Valve Mfg. Co., Boston, Mass.....	42	Goldie & McCulloch Co., Galt, Ont.....	3	Nova Scotia Steel Co., New Glasgow, N.S.....	4
American Steam Pump Co., Battle Creek, Mich.....		Gooding William, London, Eng.....	32	Oakey, John & Sons, London, Eng.....	5
Archbold, George, Prescott, Ont.....	ibc	Gordon, Drummond & Co., London, Eng.....	32	Ontario Malleable Iron Co., Oshawa, Ont.....	obc
Armstrong Mfg. Co., Bridgeport, Conn.....	21	Gray, R. A. L. & Co., Toronto.....	31	Ontario Wind Engine & Pump Co., Toronto.....	33
Atteaux, F. E. & Co., Boston, Mass. and Toronto.....	ifc	Howard, E. Clock Co., Boston, Mass., and New York City.....	30	Owen Sound Portland Cement Co., Owen Sound, Ont.....	ifc
Babcock & Wilcox, Montreal and Toronto.....	ofc	Hyde, F. & Co., Montreal.....	31	Packard Electric Co., St. Catharines, Ont.....	34
Bale & Co., London, England.....	24	Imperial Oil Co., Petrolea, Ont.....	3	Parke, Roderick J., Toronto.....	1
Barber, Wm. & Bro., Georgetown, Ont.....	ibc	Jenckes Machine Co., Sherbrooke, Que.....	24	Parker, Alfred S., New Toronto, Ont.....	ibc
Bellhouse, Dillon & Co., Montreal.....	33	Jones, J. L. Engraving Co., Toronto.....	ibc	Patent Clothboard Co., Parry Sound, Ont.....	23
Bell Organ & Piano Co., Guelph, Ont.....	29	Jones & Moore Electric Co., Toronto.....	25-36	Penman Mfg. Co., Paris, Ont.....	ibc
Benson, W. T. & Co., Montreal.....	ifc	Karch, H. W., Hespeler, Ont.....	26	Perrin, Wm. R. & Co., Toronto & Chicago, Ill.....	18
Bertram, John & Son, Dundas, Ont.....	3	Keller, John J. & Co., New York, N.Y.....	ifc	Peterborough Cance, Co., Peterborough, Ont.....	6
Big Four Route, Boston, Mass.....	27	Kelly's Directories, Toronto and London, Eng.....	31	Peters, Ulrich, Philadelphia, Pa.....	36
Bourne-Fuller Co., Cleveland, Ohio.....	29	Kemp Mfg. Co., Toronto.....	6	Petrie, H. W., Toronto.....	ibc
Bowden, J. W. & Co., Toronto.....	36	Kerr Engine Co., Walkerville, Ont.....	36	Phillips, Eugene F., Electrical Works, Montreal.....	34
Bradstreets, Toronto and New York.....	31	Kingston Foundry, Kingston, Ont.....	ifc	Plummer, F. O., Boston, Mass.....	36
Bristol Co., Waterbury Conn.....	obc	Kinleith Paper Co., St. Catharines, Ont.....	32	Queen City Oil Co., Toronto.....	ofc-34
Brown & Co., Paris, Ont.....	6	Klipstein, A. & Co., New York, N.Y.....	6	Reeves Pulley Mfg. Co., Toronto.....	17
Brush, George, Montreal.....	34	Laurie Engine Co., Montreal.....	19	Rehder Plating & Mfg. Co., Thorold, Ont.....	35
Brunner, Mond & Co., Northwich, Eng.....	5	Leitch & Turnbull, Hamilton, Ont.....	ibc	Rice Lewis & Son, Toronto.....	21
Buchanan, R. H. & Co., Montreal.....	7	Leslie, A. C. & Co., Montreal.....	ofc	Riley, C. E. & Co., Boston, Mass.....	obc
Budden, Hanbury A., Montreal.....	ibc	Lewis, Rice & Son, Toronto.....	21	Robb Engineering Co., Amherst, N.S.....	6
Buffalo Forge Co., Buffalo, N.Y.....	28	London Machine Tool Co., London, Ont.....	32	Rosamond Woolen Co., Almonte, Ont.....	ibc
Burt Mfg. Co., Akron, Ohio.....	28	Lumsden, J. & Co., Montreal.....	22	Rosendale Belting Co., Manchester, Eng.....	7
Butterfield & Co., Rock Island, Que.....	21	Marion & Marion, Montreal.....	obc	Royal Paper Mills Co., East Angus, Que.....	5
Canada Iron Furnace Co., Montreal.....	ifc	Mason Machine Works, Taunton, Mass.....	ibc	Schoellkopf, Hartford & Hanna Co., Buffalo, N.Y.....	23
Canada Switch & Spring Co., Montreal.....	obc	Mason Regulator Co., Boston, Mass.....	8	Smart, James, Mfg. Co., Brockville, Ont.....	23
Canadian Colored Cotton Mills Co., Montreal.....	36	Matheson, Wm. J. & Co., New York, N.Y., and Montreal.....	7	Smith & Cameron, Toronto.....	obc
Canadian Heine Safety Boiler Co., Toronto.....		Merrimac Chemical Co., Boston, Mass.....	ibc	Smith Woolstock Co., Toronto.....	ibc
Canadian Office & School Furniture Co., Preston, Ont.....	ibc	Metallic Roofing Co., Toronto.....	27	Storey, W. H. & Son, Acton, Ont.....	ibc
Canadian Rand Drill Co., Montreal.....	18	Meyerord Co., Chicago, Ill.....	16	Stowe-Fuller Co., Cleveland, Ohio.....	24
Canadian Rubber Co., Toronto and Montreal.....	7	Mica Boiler Covering Co., Montreal.....	23	Sturtevant, B. F. Co., Boston, Mass.....	35
Carrier, Laine & Co., Levis, Que.....	obc	Miller, J. Wallace, Bernharts, Penn.....	23	Sturtevant Mill Co., Boston, Mass.....	22
Case, Egerton R., Toronto.....	ofc	Milnes, J. H. & Co., Toronto.....	16	Sutton, Wm., Compound Co., Toronto.....	37
Clark & Demill, Galt, Ont.....	24	Mitchell, Corporation of, Mitchell, Ont.....	30	Sylvester Bros. Mfg. Co., Lindsay, Ont.....	29
Cooper, James Mfg. Co., Montreal.....	15	Montreal Pipe Foundry Co., Montreal.....	ifc	Syracuse Smelting Co., Montreal.....	7
Cowan & Co., Galt, Ont.....		Morrow Machine Screw Co., Ingersoll, Ont.....	6	Taft Dr. Bros. Medicine Co., New York City.....	obc
Crosby Steam Gauge & Valve Co., Boston, Mass.....	19	Morton Co., Toronto.....	29	Tallman, J. N. & Sons, Hamilton, Ont.....	37
Darling Bros., Montreal.....	6	McArthur, Cornelle & Co., Montreal.....	obc	Thompson, E. B., Toronto.....	
Department of Public Works, Ottawa.....	30	McEachren Heating & Ventilating Co., Galt, Ont.....	25	Thompson, W. G. M., St. Catharines, Ont.....	36
Deseronto Iron Co., Deseronto, Ont.....	ifc	McLachlan Electric & Gasolene Motor Co., Toronto.....	32	Toronto & Hamilton Electric Co., Hamilton, Ont.....	31
Diamond Machine & Screw Co., Toronto.....	35	McLaren, D. K., Montreal and Toronto.....	32	Toronto Elevator Co., Toronto.....	26
Dixon, H., Toronto.....	31	Neff, A. C., Toronto.....	ibc	Toronto Fence & Ornamental Iron Works, Toronto.....	6
Dixon, Jos., Crucible Co., Jersey City, N.J.....	26	New Toronto Woolstock Co., New Toronto, Ont.....	ibc	Toronto Paper Mfg. Co., Cornwall, Ont.....	ibc
Dodge Mfg. Co., Toronto.....	19			Toronto Patent Agency, Toronto.....	36
Dominion Bridge Co., Montreal.....	4			Trimont Mfg. Co., Roxbury, Mass.....	24
Dominion Dyewood & Chemical Co., Toronto.....	ofc			United Electric Co., Toronto.....	obc
Dominion Oil Cloth Co., Montreal.....	31			Vulite Syndicate, London, E.C., England.....	33
Dominion Radiator Co., Toronto.....	20			Walkerville Malleable Iron Co., Walkerville, Ont.....	ofc
Electric Construction Co., London, Ont.....	25			Wallberg, E. A., Toronto.....	28-30
Fensom Elevator Works, Toronto.....	ofc			Whiting Foundry Equipment Co., Harvey, Ill.....	
Fetherstonhaugh & Co., Toronto.....	ofc			Williams, A. R. Machinery Co., Toronto.....	
Firstbrook Box Co., Toronto.....	ibc			Winn & Holland, Montreal.....	5
Fleming, W. A. & Co., Montreal.....	17			Wilson Bros. Bobbin Co., Todmorden, Eng.....	
Foley, James & Co., Boston, Mass.....	23			Wilson J. C. & Co., Glenora, Ont.....	29
Forman John, Montreal.....	5-8			Wire and Cable Co., Montreal.....	ofc
Frick, H. C. Coke Co., Pittsburg, Pa.....	obc			Worth & Martin, Toronto.....	
Frost, W. H., Smith's Falls, Ont.....	obc			Wright & Dallyn, Hamilton, Ont.....	9
Garfield Paint Co., Cleveland, Ohio.....	26				

ofc ..... outside front cover.

ifc ..... inside front cover.

ibc ..... inside back cover.

obc ..... outside back cover.



American Twin Pop Safety Valves.

## AMERICAN STEAM GAUGE AND VALVE MFG. COMPANY

BOSTON, MASS., U.S.A.

MANUFACTURERS OF

Standard Appliances for Measuring, Indicating, Recording and Governing Water, Steam, Gas, Ammonia, and all pressures.

Sole Manufacturers of The Thompson Improved Indicator

HIGHEST AWARD AT PARIS EXPOSITION, 1901—The only American Indicator to receive a Medal. The Gold Medal awarded at Pan-American Exposition on Gauges, Pop Valves, Indicators and Engineering Specialties.

Also Gauges, Clocks, Revolution Counters, Pop Safety, Cylinder and Underwriters' Water Relief Valves, Recording Gauges, Pyrometers, Salinometers, and all Steamship Instruments. Send for New General Catalogue.

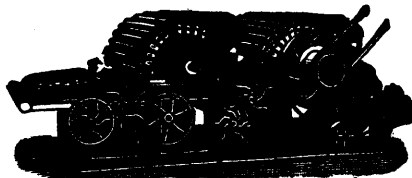
When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.



Underwriters' Pattern Iron Water Relief Valve.

**Smith Wool-Stock Co.**  
219 FRONT ST. E., TORONTO.  
Makers of  
**WOOL STOCK,  
SHODDIES, Etc.**

W. H. PARKER J. H. PARKER  
**NEW TORONTO WOOL STOCK CO.**  
MANUFACTURERS OF  
**WOOL STOCK and SHODDIES**  
Write for Samples and Prices.  
**NEW TORONTO, - ONTARIO, CANADA.**  
**A. S. PARKER, NEW TORONTO**



Dealer in Woolen Waste. Carpetting a Specialty

**PENMAN MANUFACTURING CO.**  
PARIS, ONT. LIMITED.

Manufacturers of  
**Hosiery, Shirts, Drawers,  
Glove Linings and Yarns.**

Selling Agents—D. Morrice, Sons & Co.,  
Montreal and Toronto.

**ROSAMOND  
WOOLEN CO.**  
ALMONTE, ONT.

**Fine Tweeds, Cassimeres,  
and Fancy Worsted  
Suits and Trouserings.**

**LEITCH & TURNBULL** Canada Elevator Works,  
Queen and Peter Sts.  
HAMILTON, ONT. Patent Safety Hydraulic,  
Hand and Power ELEVATORS.  
Telephone Connection.

**W. H. Storey & Son, ACON, ONT.,**  
Manufacturers  
of..... **FINE GLOVES AND MITTS**  
In every variety and style. **Moccasins.**

**WM. BARBER & BROS.**  
Georgetown, Ont.

Manufacturers of.....

**Book and Fine Papers.**

**CANADIAN OFFICE & SCHOOL FURNITURE**  
CO. LIMITED PRESTON ONT.  
FINE BANK OFFICE, CHURCH & LARGE FURNITURE.  
COURT HOUSE & DRUG STORE FITTINGS. SEND FOR CATALOGUE.

Advertise in THE CAN-  
ADIAN MANUFACTURER.

Look For  
**PETRIE'S CATALOGUE**  
of  
**MACHINERY**  
NEW AND SECOND HAND.  
TORONTO, CANADA

**F. W. HORE & SON, Limited, HAMILTON, ONT.**  
Manufacturers of  
**CARRIAGE, WAGGON, AND SLEIGH WOOD WORK.**

**The Firstbrook Box Co. Limited**  
**PACKING CASES.  
DOVETAIL BOXES.  
Bottlers' SHIPPING CASES.  
BOX SHOOKS, Etc.**

**TOP PINS, SIDE-BLOCKS & CROSS-ARMS**  
Write for prices. **TORONTO, Canada.**

**CARBONIZER** A neutral sub-  
stance, harmless  
to animal fibre  
or tissue, while it destroys burrs, etc., as  
efficiently as acid. It leaves the wool in  
fine condition. Manufactured by the  
**Merrimac Chemical Co., 13 PEARL ST  
BOSTON.**

**WOOD ENGRAVING.  
PHOTO ENGRAVING.  
HALF TONES**  
OR ANY CLASS OF ENGRAVING FOR ADVERTISING  
PURPOSES. CATALOGUES, MAGAZINES, &c.  
**J. L. JONES ENG. CO.**  
6-8-10  
Adelaide St. W. **TORONTO.**

**A. C. NEFF**  
**CHARTERED ACCOUNTANT**  
Room 500 McKinnon Bldg.,  
Tel. 1330. — **TORONTO.**  
Audits and Investigations a Specialty.

THE.....  
**Toronto Paper Manufacturing Co.,  
Cornwall, Ont.**

Manufacturers of Engine Sized Superfine  
Papers, White and Tinted Book Papers, Blue  
and Cream Laid and Wove Foolscaps, Account,  
Envelope and Lithographic Papers, etc.

Over 30 years Experience in Great Britain,  
Europe and America  
**APPLIED CHEMISTRY**

**Dr. GEO. ARCHBOLD, A.M.**  
**ANALYTICAL CONSULTING**

AND  
**TECHNICAL CHEMIST**  
(Formerly Chief Chemist, Ordnance Dept., U.S. Army  
Yard, Washington, D.C.)

Investigations made and advice given on  
matters relating to Technological Chemistry  
and Technology. Brewing, Distillation and  
Wood Pulp, etc., a specialty.

**P.O. BOX 283, PRESCOTT, ONT.**

**JOHN J. GARTSHORE,**  
83 Front St. West, Toronto.

**RAILWAY, TRAMWAY, and  
...Contractors' Supplies**  
**METALS and SCRAP IRON**  
Bought and Sold.

**PATENTS**  
**TRADE MARKS, Etc.**  
**HANBURY A. BUDDEN**  
**NEW YORK LIFE BUILDING,  
MONTREAL.**

**CARDS, DRAWING, COTTON SPINNING  
MACHINERY .. FRAMES,  
MASON MACHINE WORKS  
TAUNTON,  
Mass.  
COMBERS, LAPPERS, MULES,  
LOOMS.**

**CHAINED  
FOR TEN  
YEARS**

**ASTHMALENE BRINGS INSTANT RELIEF AND PERMANENT CURE IN ALL CASES.**  
SENT ABSOLUTELY FREE ON RECEIPT OF POSTAL.

There is nothing like Asthmalene. It brings instant relief, even in the  
worst cases. It cures when all else fails.  
The Rev. C. F. Wells, of Villa Ridge, Ill., says: "Your trial bottle of  
Asthmalene received in good condition. I cannot tell you how thankful I  
feel for the good derived from it. I was a slave, chained with putrid sore  
throat and asthma for ten years. I despaired of ever being cured. I saw  
your advertisement for the cure of this dreadful and tormenting disease,  
asthmalene, and thought you had overspoken yourselves, but resolved to give it  
a trial. To my astonishment, the trial acted like a charm. Send me a full-  
size bottle.  
We want to send to every sufferer a trial treatment of Asthmalene,  
similar to the one that cured Mr. Wells. We'll send it by mail POSTPAID,  
ABSOLUTELY FREE OF CHARGE, to any sufferer who will write for it,  
even on a postal. Never mind, though you are despairing, however bad  
your case, Asthmalene will relieve and cure. The worse your case, the more  
glad we are to send it. Do not delay. Write at once, addressing DR. TAFT  
BROS.' MEDICINE CO., 79 East 130th St., N.Y. City. Sold by all Druggists.

# PATENTS PROMPTLY SECURED

Marion & Marion, MONTREAL and WASHINGTON  
 Write for "Inventor's Help"—FREE. ENGINEERS AND EXPERTS.

By **SMITH & CAMERON**, 51 CANADA LIFE BUILDING  
 Solicitors of Patents, Experts, Engineers, etc. 46 King St. West, Toronto.

**M. ADTUIID**,  
*Labour Gazette*  
**CORNEILLE & CO.,**  
 OFFICES:  
 310 to 316 St. Paul Street.  
 WAREHOUSES:  
 147 to 151 Commissioners Street.  
 ...MONTREAL...  
 AGENTS FOR . . .  
 Berlin Aniline Co.,  
 Aniline Colors and other Coal Tar  
 Products.  
 Stamford Manufacturing Co.,  
 Dyewoods and Extracts.  
 Coez, Langlois & Co.,  
 French Extracts.  
 Miller Extract Co., Hemlock Extracts  
 British Alizarine Co., Alizarine.  
 J. H. Heald & Co., Extracts Oak, etc.



**The Ontario . . .  
 Malleable Iron Co.**  
 (Limited)  
 . . .Manufacturers of . . .  
**MALLEABLE IRON . . . . .** Castings to Order for all kinds of  
**AGRICULTURAL IMPLEMENTS .**  
 . . .AND . . .  
**Miscellaneous Purposes . . . . .**  
 ————  
**OSHAWA, - - ONT.**

## THE UNITED ELECTRIC CO. Limited.

SUCCESSORS TO  
**W. A. JOHNSON ELECTRIC CO.**  
**THE TORONTO ELECTRIC MOTOR CO., Limited.**  
**THOMPSON ELECTRIC CO.**

We Manufacture a complete line of **Electric Light and Power Apparatus.**

ARE PREPARED TO CONTRACT FOR COMPLETE INSTALLATIONS.

Head Office, - **134 KING ST. W., TORONTO, ONT.**

**THE CANADA SWITCH & SPRING CO., LIMITED.**  
 Manufacturers of  
 . . . . .SPECIALTIES FOR . . . . .  
**Steam and Electric Railways,**  
**SPRINGS, STEEL CASTINGS, FROGS, FORGINGS, TRUOKS FOR ELECTRIC RAILWAYS, ETC.**  
**INTERLOCKING SWITCH and SIGNAL PLANTS,**  
 (Under patents of Messrs. Saxby & Farmer, Limited, of London, Eng.)  
**CANAL BANK, POINT ST. CHARLES, MONTREAL**

**BRISTOL'S PATENT STEEL BELT LACING**  
 ———— ONE HUNDRED SIZES ————  
  
 READY TO APPLY FINISHED JOINT  
**Greatest Strength with Least Material**  
 EASILY APPLIED and LOW IN PRICE  
*Saves Time, Saves Belts, Saves Money*  
**SAMPLES SENT FREE**  
 . . . . .  
**THE BRISTOL CO.**  
 WATERBURY, CONN.

**SMITH'S FALLS Malleable Iron . . . . . Works . . . . .**  
 . . . . .  
**CAPACITY 3,000 TONS.**  
 . . . . .  
**WILLIAM H. FROST**  
 PROPRIETOR  
**SMITH'S FALLS, ONTARIO, CANADA.**

**TRADE MARKS, DESIGNS, PATENTS**  
 Caveats, Copyrights, etc.

Promptly Secured in all Countries

**CARRIER, LAINE & CO. Dredges, SAW MILL MACHINERY,** Montreal Branch . . . 147 St. James St. Quebec Branch . . . 263 St. Joseph St.

**C. E. RILEY & CO.**  
 also Extra Fine Quality Moulding Sand  
 WRITE FOR PRICES  
 HAMILTON, ONT. Manufacturers of  
 LATEST IMPROVEMENTS AND SPECIALTIES.  
 CARD CLOTHING, ETC.